

Manufacturers Record

Exponent of America

AUGUST 19, 1920.

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Table of Contents

Number 8

Senator Robert L. Owen Vigorously Criticizes Federal Reserve Board.....Cover Page

EDITORIALS - - - - - 79 - 89

Southern Farmers Demanding Protection.

England Expanding Business While America Throttles It.

New England's Coal Supply.

Business Interests Being Hampered by Federal Reserve Board's Deflation Work.

Mandatory Quality of Article X.

"Open Diplomacy" in Dealing with Poland and Russia. The Silly Season Must Be On in Birmingham.

Why Men of Honor and Patriotism Oppose the League of Nations.

Every Lynching Is a Greater Crime than that of the Criminal Lynched.

Training Courses Suggested for Commercial Secretaries.

SYMPOSIUM

Aggressive Work for National Welfare by Railroads and Banking Interests Supremely Important—Letters From Leading Railroad Presidents on Outlook Under New Rates..... 85

NEWS ARTICLES

Senator Robert L. Owen Scores the Federal Reserve Board for Its Unwise Deflation Work Through Curtailment of Credit..... 90

Revolution by the Russians the Hope of United States and Great Britain.....By P. H. Whaley 93

How American Revolutionary Propaganda Works..... 95

Bartering Our Americanism for Old-World Pottage.....By Lida B. Robertson 96

Boston Banker Takes Encouraging View on European Situation—Three Months' Study of Conditions Warrants Optimism.....By John Bollinger 97

The Only Safe Way to Americanize the Foreigner and Lessen Labor Agitation..... 98

The Plans and Purposes of a Negro Industrial Organization as Told by One of Its Leaders.....By Rev. P. Colfax Rameau 99

Significance of the Surrender of Villa in Probable Resumption of Mining and Other Operations..... 100

Protection Against Turkish Tobacco Being Demanded by Virginia and Carolina Growers..... 101

Trade Developments in Great Britain—British Dye Industry, Shipbuilding and Trade With Germany.. 102

Water Power Unused Is Wealth Wasted.....By A. V. Draper 103

A Solution for the Present Fuel Problem.....By F. F. Uehling, A. S. M. E. 106

The Development of the Artificial Silk Industry in the United States and the New Plant at Hopewell, Virginia.....By Robert H. Murray 109

The Cotton Industry in the Southwest.....By Charles M. Morgan 110

Oklahoma Cotton Growers for Co-operative Growing, Warehousing and Marketing..... 113

A New York Cotton Exchange Member Who Knows the Inside Facts Outlines the Cotton Situation... 114

Coal Production, Movement and Stocks Held by Railroads..... 116

The Texas Company Brings in a Wonderful Well—Now Producing Wealth at Rate of \$90,000 a Day.. 117

Are Southern Shipping Lines Endangered?..... 119

DEPARTMENTS

News and Views From Our Readers..... 120

The Iron and Steel Situation..... 121

Good Roads and Streets..... 124

Railroads..... 125

Mechanical..... 126

Foreign..... 127

Construction News..... 128

Industrial News..... 142

New Financial Corporations..... 146

New Securities..... 146

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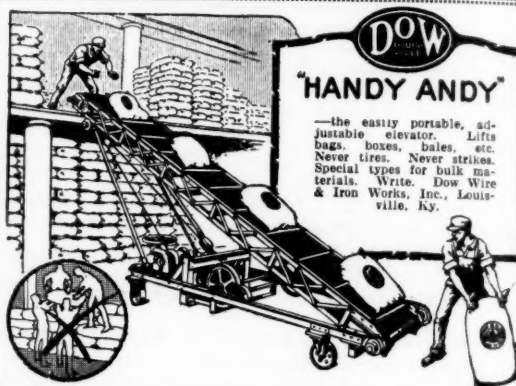
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SOUTHERN FARMERS DEMANDING PROTECTION.

TOBACCO growers in the Virginias and Carolinas, in line with the demand of the peanut growers of these States, are beginning to realize that a protective tariff is essential to their welfare. Our Richmond correspondent, whose letter is published in this issue, on this point, says

"Incidentally, it may be observed, tobacco culture for cigarette making is changing the views of a great many Virginia people on the tariff. Already there is being heard in the land a clamor for a high protective tariff against Turkish leaf tobacco, vast quantities of which are imported to enter into the manufacture of cigarettes in competition with the bright leaf that is now so profitable to the farmers of the Virginia-Carolina 'Old Belt' and the new tobacco-growing regions of Eastern Virginia, Eastern North Carolina and South Carolina and Georgia."

Commenting on the demand of the peanut growers for a protective tariff, as recently published in the MANUFACTURERS RECORD, the Press and Banner of Abbeville, S. C., says:

"That is from \$60 to \$100 a ton in favor of the Eastern coolie. It represents a form of competition which no people accustomed to a decent standard of living can meet. And if the differential is so large, in spite of comparatively heavy rates, what will it be when ocean rates decrease? Nor will the fall in the price of silver be a factor favorable to American peanut growers. It will multiply the advantage the coolie has."

"Moreover, it is worth while to point out that interests favoring low prices for cotton may be expected to be more than jubilant over this great peril to the peanut industry. It may be possible, it is reasoned, to drive the Southern farmer back into cotton production if the growing of peanuts is made unprofitable for him."

"The Norfolk convention devoted its entire session of the first day to a consideration of a protective tariff, resolutions favoring the tariff being adopted."

"The convention made plans to organize and educate the farmers in every peanut-producing section. Pamphlets descriptive of the situation and exposing the necessity of a tariff barrier against Oriental peanuts will be distributed from every peanut

mill in the South as a center. Candidates for Congress will be queried and compelled to state definitely whether or not they will vote for the protection of the industry.

"We regard the situation as of fundamental economic and political importance. It means that there must come into existence a whole galaxy of protection Democrats, or that whole sections of the South will turn to the Republican party for relief. In other words, the march of events has made the old fighting ground of the two parties untenable. Protection sentiment is being nationalized. It was always, in fact, American policy rather than a party policy, and the time is coming when Democrats will have to so recognize it. Otherwise, they will be repudiated in their own strongholds."

"The right of an American producer to be protected by his government against 8-cents-a-day labor in the East is a real and a national right. It is not in any respect, or ought not to be, a partisan matter. It is a theory and a principle to which voters in all parties should subscribe. A distinguished American engineer, managing a large steel plant in India, stated in a public meeting in New York several years ago that he was employing about 8000 hands, and that the average of pay, including even skilled workers, was between 7 and 8 cents per day. Agricultural labor, we believe, is paid even less."

"We see in this whole agitation a return to reason and the dawning of a day when the South, inexorably influenced by economic law, will take its stand also in favor of the fundamental Americanism of which protection is an exponent."

ENGLAND EXPANDING BUSINESS WHILE AMERICA THROTTLES IT.

A WELL-INFORMED business man, who has given much time in England as well as in this country, to the study of business conditions, but whose connections are such that, like most others who criticize banking interests, he feels that it is unsafe for his name to be known for fear that he will call down the ill-will of the banks, writes to the MANUFACTURERS RECORD in regard to the tremendous expansion of business activity in England. In his letter he says

"I was just looking over the cabled reports of the British trade statements for July, and the figures are really amazing. I am sending you under separate cover the detailed figures. It is certainly the most remarkable document in respect of trade expansion ever put out by that country. This tremendous increase in the volume of business done was transacted or put through with their bank ratio of gold reserve to liabilities averaging about 11 3/4 per cent, while ours averages over 40 per cent for the same period. It clearly demonstrates that they are going after the export trade of the world, regardless of gold reserve ratios, and they are successful in getting the business. Consider the important item of imports totaling only 163,000,000 pounds, which were the smallest since November, 1919, and their exports, totaling 155,000,000 pounds, far and away the largest on record for any month. This resulted in bringing the British debit balance down to about 8,000,000 pounds, which is not only the smallest for the entire war period, but is smaller than many pre-war monthly debits. This favorable showing, together with the enormous revenues coming in from freight and passenger traffic, insurance, income and other revenues not shown in these trade statements, will begin to cause sterling to climb sooner or later. It may also cause our bankers here to open their eyes to the deplorable state of affairs they have got our credit system into, and they may soon begin to realize that it is about time that they loosened up a bit for legitimate enterprise, essential industry and the betterment of credit facilities for our export trade."

CREATING FICTITIOUS SPECULATIVE CONDITIONS.

MR. THEODORE H. PRICE, editor of Commerce and Finance, in a letter to W. H. Warner & Co., coal merchants of Cleveland, discussing the coal situation, said:

"You ask me how I can conceive of creating a coal shortage that is not real. An unreal coal shortage cannot be created, but an illusion of a shortage can be easily created by alarmist reports and a concealment of the available supply. I am reliably informed that the railroad tracks in this section are now blocked with cars containing coal that has been bought up for speculation. **I have myself been something of a speculator in cotton in my day, and I know that it is possible to make people believe there is a scarcity when there is in fact an abundance.**"

The last statement in Mr. Price's letter is a very amazing one. It is almost a frank admission that he has in times past helped to make people believe there was a scarcity of cotton when there was an abundance, and we wonder if Mr. Price cannot also say with equal truth that many times he helped to create the impression that there was an abundance of cotton when there was in reality a scarcity.

Those who remember the great influence that Mr. Price's views had on the cotton market for some years will be interested in the frank admission that as a cotton speculator he was able to create an impression contrary to the actual facts. That is a rather damning admission, unless there should go with it a full apology to the public for having been a party to such methods.

The man who for speculative purposes seeks to misrepresent the actual facts as to the supply of material on hand, whether it be cotton or grain or stocks, and seeks by misleading the public to profit personally by the influence which he can thus exert, needs to take a few lessons in morality.

As compared with any man, be he banker or speculator or what not, who thus uses his brain power to mislead other people and cause them to speculate on the wrong side in order that he may reap a profit, the criminal who sandbags his victim in a dark alley and robs his pocket is "a gentleman and a scholar."

GEORGE WASHINGTON OUT OF DATE.

"One hundred and twenty-five years ago next October, George Washington, in a letter to Patrick Henry offering him the Secretaryship of State, wrote:

"I want an American character, that the Powers of Europe may be convinced that we act for ourselves and not for others. This is the only way to be respected abroad and happy at home."—Boston Transcript.

Why quote George Washington in these days when his teachings were regarded, up to a few years ago, as almost inspired, and following which our nation progressed and prospered as no other country in human history?

Does not the Transcript know that though the South once regarded Washington as the greatest man it ever produced, and proudly boasted that he had never had an equal, it now runs after other gods as much of the country is doing?

Many people are in this era trying to supplant sturdy, upright, God-serving Americanism by a mushy, sickly, sentimental internationalism. Why should a man love and serve his family first? Why not merge his family, wife and children into all wives and children?

A SAFER WORLD WAS POSSIBLE.

THOMAS J. PANCOAST, secretary of the Miami Beach Improvement Co., Miami Beach, Fla., writes:

"If the truth was ever spoken, it surely has been done on the cover page of your issue of July 29. On the walls of my office hangs a sheet from the supplement to the MANUFACTURERS RECORD of August 29, 1918—'On to Berlin!' Had your advice been followed, the world would be a better and a safer place in which to live."

NEW ENGLAND'S COAL SUPPLY.

THE Boston Transcript and other New England newspapers were prone a few weeks ago to charge that the coal difficulties of New England were due to the rapacity of Southern mine owners. It is to be recollected also that New England began the agitation which resulted in the adoption of the priority system by the Interstate Commerce Commission.

The testimony of Daniel B. Wentz, president of the National Coal Association, before the Senate Committee on Reconstruction, reveals what has been very generally known in the trade. Mr. Wentz declared that the estimates of Commissioner Starrow of New England's requirements were exceedingly rough, and that New England could not possibly use the quantity of coal for which it had applied. "However, we will give them their 1,000,000 tons monthly and see what they will do with it."

It is possible to guess now what they will do with it. There has been called to our attention an advertisement from a New England paper reading as follows: "Bituminous Coal—Manufacturer, having surplus of soft coal arriving daily, would sell few cars. Phone Pawtucket 2400."

But to give New England this surplus of coal, other industries throughout the country must do without shipping facilities and face ruin. When the Transcript stated that the patience of New England was being sorely tried, we suggested that it might be the patience of the rest of the country that was near the breaking point.

Mr. Wentz also testified that at a conference of fuel administrators and others in New England the agent of the Boston & Maine Railroad admitted that he had contracted for only 60 per cent of his supplies up to April because he expected a decline in price. "He missed his market, and promptly the mine operators are blamed for the shortage of New England supplies."

The operators may be blamed, but the cost has been shuffled on to the shoulders of other industries which were unable to secure priority rights from the Interstate Commerce Commission.

The plain truth is that New England refused to buy coal when she could get it, and then demanded that the transportation machinery of the nation be dislocated to remedy her own blunder. To cap the climax, she insisted on having more coal than she can use.

The facts, at last coming out, make the charge that the South was holding up New England, let us say, silly.

THE GOLDEN RULE.

MR. T. S. JOHNSON, president of the Citizens Bank & Trust Co. of Jefferson, Ga., in a letter to the MANUFACTURERS RECORD, says:

"I wish to thank you for the fearless stand you take in defense of sacred principles that should be dear to every man and woman who believes in Divine teaching.

"If 'the laborer is worthy of his hire,' if the 'Golden Rule' is to be observed, where would I stand if I object and use my influence to defeat your position, 'that the labor that produces cotton is entitled to cost of production, plus a reasonable profit' that he may be enabled to care for his wife and so rear and educate his children that they grow up useful and worthy citizens.

"Your article of July 20, 'To the Cotton Manufacturers of the South,' I think the fairest presentation of the cotton growers' condition I have seen in print. I regret to see in your last issue that so few mills have written you on this subject. I am among those who believe that with the co-operation of the cotton grower, banker, merchant, manufacturer and every interest of the South working in harmony, and righteously, the South would come into that position that a kind Providence made possible. I appreciate your writings to that extent that I can not miss the MANUFACTURERS RECORD.

"In your last issue your article 'The Voice Is the Voice of Jacob' is the most convincing presentation on that most important subject I have seen."

Business Interests Being Hampered by Federal Reserve Board's Deflation Work

WITHIN the last few days the MANUFACTURERS RECORD has been in receipt of many letters from bankers in commendation of its position on the action of the Federal Reserve Board and of its general value to banking interests.

President W. B. Drake, Jr., of the Merchants' National Bank, Raleigh, in renewing his subscription, on August 10, wrote:

"I look upon the MANUFACTURERS RECORD as the most valuable publication that comes into my home."

The Collins Granite Co. of Danville, Va., wrote:

"Until the Federal Reserve Board takes some action on the very sound advice which is being given through your editorial columns I think we are going to have difficulty in moving what stone we can sell, and that our problem will not be one of making sales, but one of deliveries."

Another letter of interest on the same subject is from Messrs. Harold G. Wise & Co., investment bankers of Houston, who wrote as follows:

"The article by Mr. Edward C. Stokes, president of the Mechanics' National Bank of Trenton, N. J., in the MANUFACTURERS RECORD, and the frontispiece of the RECORD, August 5, have just come to my attention.

"I will not pass this opportunity of offering you what encouragement it might give you by writing you in support of your great work on this subject. You are entitled to this expression from each and every one of your subscribers and friends, which you are no doubt in possession of.

"In this section the ranchmen as well as the cotton farmers are unable to finance their cattle herds and cotton crops, as they should be financed, as producers.

"The action of the Federal Reserve Bank to its member banks in this section has brought this about by their 'blanket policy' operation. This is nothing short of curtailment of essential production, when they are preaching more production and less credit. How is this going to produce essential production?

"Does the Federal Reserve Board not have power to discriminate against speculative loans in lieu of operating under a blanket policy; that is, curtailing essential production to a much greater extent than it is curtailing non-essential credit, and deflation of currency? Certainly so, for they seem to possess the power of God in every other respect.

"Our financial situation needs such a helping hand, and we beg of you to continue your good work, which will do much to bring about the necessary changes for the better."

Mr. J. A. Ormond, chairman of the executive committee of the State Bankers' Association of Florida, writes:

"I have been so impressed with the soundness of your ideas and the progressiveness of your policies regarding banks and banking, and finances generally, that I have thought it would be a good plan to place your magazine in every bank in Florida if it can be done. I cannot get away from the fact that you are preaching sound financial doctrine. Your views on the operation of the Federal Reserve System have so often coincided with mine that I am taking the liberty of sending you under separate cover a copy of the annual proceedings of our State Bankers' Association at Pensacola, containing a paper that I read on one phase of the activity of the Federal Reserve banks."

In the annual convention of the State Bankers' Association of Florida, held a few months ago, Mr. Ormond made a remarkably interesting address, in which the relation of the Federal Reserve Board to the State banks of the country was discussed with great clearness. Some statements made by Mr. Ormond are of far greater interest, however, than merely the relationship between State banks and the Federal Reserve Board. In the course of his statement he charges the Federal Reserve Board with making definite threats against State banks which refused to become members of the Federal reserve system. He said:

"So when the proposition came to us of Florida and the Atlanta Federal Reserve District it had but little to commend it to our approval and support in the record of its operation elsewhere. Also, when its operation was introduced to us by the fulfillment of threats of the Federal Reserve Bank to employ methods that were irregular, illegal, undignified and unbankable to either subjugate or ruin us, it has less than ever to make us love its appearing.

"Perhaps here in the 'Solid South' we are more tenacious of our rights and liberties, or perhaps we are a hard-headed and stiff-necked generation and are standing in our own light. Be that as it may, we are yet in a state of open rebellion against the authority of the Federal Reserve Board and many a bloody battle-field yet lies between us and the terrors of reconstruction at its hands. Perhaps we may lose the fight, but we serve notice on our friends, the enemy, that victory is sometimes more costly than defeat. The first victory that was won by them in the court is likely of itself to be sufficient for their undoing, for if it is true, as it apparently is, that Congress has created an institution that is supreme in itself and answerable to no court; that possesses the power of life and death over all banks, bankers, banking and finance; that can make money plentiful or scarce and produce prosperity or panic at will; that knows no law and recognizes no reason except the 'discretion' of its despots, then it is most likely that Congress will sooner or later take cognizance of the fact that the monopoly of the Federal Reserve Board is more dangerous than was the monopoly of Wall Street, and amend the law to abridge its activities.

"In the meantime, we are seeking relief from a condition which we believe is unbearable—the usurpation by the Federal Reserve Board of authority to control the operation of non-member State banks, an authority that not even Congress could give it unless empowered to do so by the submission and ratification of a constitutional amendment abrogating Article X of the Constitution of the United States.

"Proof of the intentions and motives of the Federal Reserve Board and of its puppets, the officers of the Federal Reserve banks and their branches, is found in the circular-letter of the governor of the board, wherein he states that the action of the board against the non-member banks is being taken 'in justice to member banks,' and in a private letter from the governor of the Atlanta Federal Reserve bank he stated: 'The whole trouble, Mr. Ormond, is that the State banks are getting up a good deal of feeling because they see we are endeavoring to do something that will cause them a loss of revenue that they enjoyed a good many years. You must remember the national banks enjoyed the same revenues and they had to give it up, and why should the State banks be allowed to continue to receive revenues from that source?'

"If these two voluntary statements issued by such high authorities do not indicate that the present activities of the Federal Reserve banks are willful usurpation of authority and that their object is not altogether altruistic, but is inspired to some extent by chagrin at the banking figures mentioned at the beginning of this paper, then it would be interesting to know what they do indicate. Not content to confine their operations against the banks to the channels of direct communication with the banks, the publicity of the press has been employed to disseminate misinformation to a credulous public, as when the latter official issued a widely published statement to the effect that 'all national banks * * * remit at par for all checks drawn on them.' Replying to a courteous letter directing attention to this manifestly untrue statement and requesting correction in the same public manner in which it had been made, he admitted that the statement was incorrect, but declined to make public correction of it, 'since this whole matter has now gone into the courts.' And so the work of driving the State banks into the Federal Reserve System or out of business goes merrily on, the prejudicing of the banking public being one of the favored methods."

Early last winter we warned the country that the policy of the Board, if continued, would break down the price of cotton and grain and other farm products, close factories and throw men out of employment and cause poverty to prevail where abounding prosperity had reigned. Those predictions are being fulfilled.

MANDATORY QUALITY OF ARTICLE X.

IN view of the recent suggestion of the Philadelphia Public Ledger that the United States engage in international harlotry by hiring the German to wage war against the Reds, payment being made by mitigation of the peace terms, it is not surprising that the same newspaper should be engaged in persistently misinforming its readers about the League of Nations.

Referring to the Polish situation, the Ledger solemnly declares that "membership in the League would not oblige any nation to plunge today into the maelstrom. The utmost that would be required of a nation would be economic action."

The Covenant itself provides for economic action if members of the League disregard Articles 12, 13 or 15. The Polish situation has to do with Article 10. When the Ledger says that the "utmost that could be required of a League member would be economic action" it simply fails to tell the truth.

If the territory of a member of the League is threatened by external aggression, as in the case of Poland, Article 10 specifically provides not that the Council "may," but that the Council "shall" advise upon the means by which this obligation (guarantee of territorial integrity) shall (not "may") be fulfilled. The League might, if it wished, recommend economic pressure, but it would not be bound at all to do so. It would be bound, in case such pressure were tried and failed, to use military force.

The Ledger then goes on to recite the processes by which the nation's pledge could be repudiated. It points out, which is true, that a military policy decided on by the Council would have to carry the approving vote of the American member. "Our own man would recommend to us what we should do. * * * But we would be under no obligation to accept this recommendation."

The editors of the Ledger are obviously not in entire accord with the paper's distinguished contributing editor, Mr. Taft, for the latter says:

"The second (proposed reservation by Governor Cox) is that the United States must act in accord with its constitutional limitations, which the treaty-making power cannot alter. This is only saying an undisputed thing in a solemn way. The obligations of Article X are, of course, to be performed by the United States in accord with its due constitutional procedure. If by that article the United States is under obligations to go to war, then Congress must, under the Constitution, declare and maintain the war."

"Mr. Lodge has admitted from the first that the United States may constitutionally agree to make war and bind Congress in good faith to carry out the agreement, but he, and those who stand with him, object to Article X not because we have not the power to assume an obligation to make war, but because, under the article, it will imperil the nation to do so by constantly dragging us into wars in which we can have no real interest.

"The supporters of the Lodge reservation as to Article X oppose any obligation which may require Congress in good faith to declare war when, unhampered by the obligation, it would not do so. This, they affirm, Article X does. They object to putting Congress and the United States Government in a position where they would have to break faith in exercising a full discretion on the issue, war or no war."

The President has said that the obligation to follow the recommendation would lie; that it would be a moral obligation stronger than any legal obligation. He has refused to accept the Lodge reservation, which merely accomplishes what the Ledger so erroneously says has already been accomplished, and he has refused to accept it because it would "take the heart out of the League" not to have Congress bound in advance. The President himself has never proposed parliamentary outlawry. He has never suggested that we go into the League with a secret purpose to violate its provisions. He

has asked for approval of Article 10 on the ground of what it does mean and not on the pretense that we can avoid payment of our note by subterfuge.

It would be a good thing if all Ledger editorials on the League were submitted to Mr. Taft for approval and correction before publication.

STICK TO THE TRUTH.

IN referring to the world turmoil recently discussed in the MANUFACTURERS RECORD, the Cotton and Cotton Oil News of Dallas, speaking of this paper, said: "It virtually admits opponents of the League responsible for present mighty world turmoil." There is not one scintilla of truth in that statement. The Cotton News may have taken the heading from some other paper, we do not know, but whatever paper first put that heading over our reference to the world turmoil deliberately falsified.

The editorial to which reference was made specifically charged that the socialistic influence at Washington was sufficiently strong to override the request of the British Government that Trotsky's passports be recalled and be kept in this country, when this Government and the British Government had learned definitely what his plan was in going to Russia. With that the League of Nations had nothing in the world to do. The Government failed in one of the most crucial events in all human history, and when a socialistic element in Washington was able to secure the permission of Trotsky to go to Russia, it demonstrated the terrific power which it exerted in this country at that time, and which it still exerts. History will be compelled to record the fact that when we permitted Trotsky, knowing his mission, to join Lenin with the co-operation of the German Government, we were responsible for much of the world turmoil which Bolshevism has created.

This Government is now tremendously disturbed by the spread of Bolshevism, and is denouncing Bolshevism with all the vigor of the English language, but there is nothing new in Bolshevism today which any intelligent man, familiar with conditions, should not have been able to foresee when we permitted Trotsky to go on his accursed mission.

HEAVEN AND HELL.

Triplett Lumber Co.

Charlotte, N. C., August 7.

Editor Manufacturers Record:

I read the MANUFACTURERS RECORD; think it fine, agreeing in the majority of your statements, but sometimes there are things which I cannot quite understand. You so often use the contrast between Heaven and Hell, which leads me to ask you the question, Where is Hell, who made it and when was it made? In the 31st verse of the first chapter of Genesis we read that "God saw everything that he had made, and behold, it was very good."

I. C. TRIPLETT.

Replying to the above, the MANUFACTURERS RECORD is not advised as to the exact location of Hell, but that there is a Hell is made very emphatic throughout the Bible.

As to the use of the term "As far as Heaven from Hell," an expression which has been common for many years, this, doubtless, originated from a similar comparison to be found in the 11th chapter of the Book of Job, verses 7, 8 and 9, which read as follows:

"Canst thou by searching find out God? Canst thou find out the Almighty unto perfection?"

"It is as high as heaven; what canst thou do? Deeper than hell; what canst thou know?"

"The measure thereof is longer than the earth, and broader than the sea."

Mr. Triplett desires to know how Hell came into existence, since God saw everything that He had made was good. Will Mr. Triplett please tell us how sin and sickness came into the world? We feel quite sure that God is not the creator of either sin or sickness, and yet they are in evidence everywhere.

"Open Diplomacy" in Dealing With Poland and Russia

IT is not by way of criticising the latest attitude of the Wilson Administration toward Poland and Russia, but for the sake of emphasizing a striking difference between the diplomacy of the American democracy and the popular government of the British Kingdom that we parallel the introductory sentences in the speech of Lloyd George to the Commons and in the letter from our Department of State to the Italian Ambassador, on the same date and on the same dangerous and difficult subject:

Letter of
Department of State.

Speech of
Premier Lloyd George.

"I will attempt without delay a definition of this Government's position not only as to the situation arising from Russian military pressure upon Poland, but also as to certain cognate and inseparable phases of the Russian question viewed more broadly."

"I promised on behalf of the Government, before we committed ourselves to any definite action, to take the House into its confidence and to state clearly what we proposed to do."

How many difficulties might have been averted had President Wilson, following the democratic method of government, which means co-operative government, taken Congress, or the Senate, into his confidence before committing this nation to foreign policies! The autocratic ring of this recent State paper cannot escape the sensitive public, jealous of its Constitutional rights, nor will it fail to arouse opinion against the continuance of a system of international negotiations in which the simple will of one man may plunge the country into a crisis that might involve the national honor and lead us straight to war.

In like manner, without consulting the representatives of the people, a note was sent the other day to Japan, undertaking to give orders to that country in regard to her occupation of the northern half of the island of Saghalin, geographically the largest northern land-mass in the Japanese Archipelago, and furthermore venturing to dictate to her concerning her occupation of Siberia.

Are the American people willing to stir anew the animosity of Japan? It would be interesting to see what the Senate Committee on Foreign Relations would say to that before we should become committed as a nation to a policy of general restraint on Japan that cannot improve the friendship between the two countries. Do the American people care whether Japan occupies and holds the Amur Valley in Siberia? Perhaps they do, but neither President Wilson nor anyone else knows until the question has been presented to our great popular assembly, which, through its close touch with the home constituencies of the members, is able to find out and express an opinion of value.

As between the two methods of approach to a grave world-problem, shown in the foregoing parallel, the people may judge which is the course of "open diplomacy, openly arrived at." The State Department's letter is an example of diplomacy opened to public view after the nation had been committed to a policy.

It so happens that we are in virtual agreement with the President's viewpoint as disclosed through his Secretary's statement in this letter: it is the peril lurking in the system of secret diplomacy that we deplore. Had open diplomacy been followed the President would not be in the equivocal position in which this note leaves him after the slap given to Poland only a few weeks ago, when this Government authorized the resumption of trade relations with the unspeakable Soviets, the same murderous band whose regime, according to the letter from our State Department to Italy on August 10, "is based upon the negation of every principle of honor and

good faith, and every usage and convention underlying the whole structure of international law; the negation, in short, of every principle upon which it is possible to base harmonious and trustful relations, whether of nations or of individuals." As if this indictment were not enough, the letter recites further: "The very existence of Bolshevism in Russia, the maintenance of their own rule, depends, and must continue to depend, upon the occurrence of revolutions in all other great civilized nations, including the United States, which will overthrow and destroy their governments and set up Bolshevik rule in their stead."

This is in substance what the MANUFACTURERS RECORD urged when it was protesting against the rumored purpose of the British Government to accept the representations of Krasin and throw down the trade barriers with Russia. Why, if all this iniquity and world-peril can be charged against the Bolsheviks today, did our Government hasten to extend the hand of fellowship to these same ruthless savages in advance of similar action, which, by the way, has never yet been taken, by Great Britain? And yet these Bolsheviks so scathingly and truthfully denounced are exactly the same people—and not a whit worse now than then—to whom President Wilson, while in France, agreed to send a commission, one member of which was one of the most noted socialistic writers of the world whose moral turpitude was so universally known that his appointment staggered every friend President Wilson had, and no man or woman has ever yet dared to defend this appointment which slapped in the face every virtuous man and woman in America.

The peculiarities of secret diplomacy are that the controlling and directing hands stay hidden. It would be interesting to know the influences that led our Government into such a stultifying position as to appoint such a commission and make trade agreements with the political vipers of the age, which it subsequently denounces, almost while the ink remains wet on this incomprehensible trade agreement, in such scathing words as these: "This attitude of disregard of obligations voluntarily entered into, they (the Bolsheviks) base upon the theory that no compact or agreement made with a non-Bolshevik government can have any moral force for them. They have not only avowed this as a doctrine, but have exemplified it in practice."

Has the United States Government discovered this only since entering into its trade agreement with Russia? If so, it is time that the whole body of government officials were cleaned out and substituted by men who know how to get the facts, even if they have to depend on the newspapers to obtain them.

One evil of this shifting policy is that, just at a critical juncture, when Poland was struggling to save herself from defeat, we made a bargain with her enemies that gave to them not only encouragement and standing among radicals throughout the world, but opened the door to supplies that they sorely needed. It may be objected that there has not been time for Russia to gain much from this license to trade with us; nevertheless, she has gained something in a material way; she has been strengthened infinitely more through the inspiring effect produced on the Soviets by the knowledge that the great United States had closed its eyes to their crimes against society and was offering them the chance to exist and sow the earth with the seeds of carnage. It was thus that we turned cold and heartless from Poland, forgetting the historic ties that have endeared her to all true Americans, and lending aid and comfort to her mortal enemy. How shall the American people wipe out this sin that unwittingly they have committed against the land of Kosciusko? Would this have happened had the methods of open diplomacy been fol-

lowed? Every true American—man, woman and child—in the land knows that it would not.

The State Department's letter on Poland is written with illumination, but is not itself wholly illuminating. In that respect, we suppose, it may be termed "diplomatic." It declares its faith in the Russian people, by which naturally is meant the majority. Since only about 10 per cent of the Russian people are in heart and practice "soviet," we subscribe to the same view—we have faith that the Russians will yet welcome a rational government, such, for example, as the Western Powers believe General Wrangel would establish. The document also affirms belief in the eventual return of Russia as a chastened and acceptable member of the family of nations.

France has taken these ambiguous words as being capable of translation into action. If they are not to have significance at a moment of such grave international peril as this they should not have been written. The present is no time to toy with political verblage. So France has put a meaning, suited to the immediate necessities of the case, into these broad generalities of the letter. Accordingly, she promptly recognized General Wrangel, and then announced to us her satisfaction on seeing that we stood ready to welcome decent government in Russia.

In General Wrangel had been found the man who, by his past record and by his immediate courageous policy, stood for the regenerate Russia that the United States must have had in mind!

We are not entirely sure that either Mr. Wilson or Mr. Colby meant that much when those pretty and humane words were written, any more than we believe they anticipated that the Polish minister would put a practical interpretation upon the assertion that "the policy of this Government will be directed to the employment of all available means to render it (the maintenance of Poland's political independence and territorial integrity) effectual," by immediately demanding credits for the purchase of war supplies the morning after the note was published. We fear that it was intended to be no more than another literary effort of the kind that has become so familiar to the American people through the long blundering negotiations with Mexico and Germany, to go no further, for examples.

France, however, aware of secret engagements between Germany and the Soviets, and conscious of the fact that a well-supported counter-revolution would become popular among the Russian peasantry as soon as they could be confident that it would be safe to co-operate with it, has attributed to the doubtful words of our State paper a manly and sincere intent to serve the interests of civilization. France stands as the bulwark against the threatened invasion of the hordes that would destroy the fabric of our culture, and plunge us again into medieval night. Unless her hands are held up effectively Germany and Russia will descend as a wave of barbarism and destroy the world. France is nearest the danger. She knows it in its intimate and terrible aspects as no other more distant nation does or can.

It is well that she chooses to interpret our official utterances into conformity with the one and only plan that offers a real threat at the power of sovietism, a body-blow in the rear, following the Soviet success in Poland, wresting away a valuable base of supplies, and making it impossible for the Soviets to venture on a wild campaign of loot through Central Europe. In commending this policy and in sustaining it with credits and moral support we may avert another war.

SOME QUESTIONS BY A NORTH CAROLINA ATTORNEY.

Iredell Meares,
Attorney-at-Law.

Wilmington, N. C., August 7.

Editor Manufacturers Record:

I constantly read your issues. I wish they could be read by every citizen of this country. They are informing, educational and entertaining. One finds his American spirit renewed to greater activity by reading your editorials.

I saw some time since an article in your paper, written, if I recall, by a Mr. Dwight, on the failure of the Peace Conference to open their sessions with prayer, and set it aside, but have lost it since. Can I get a copy of the MANUFACTURERS RECORD containing it?

I also saw a reference to Dr. L. G. Broughton's saying the treaty was an un-Christian document which would provoke war. Can you inform me when and where he so stated and how I may get exact information of his remarks?

You are busy, but my observation is that busy men find time to do things, even acts of consideration, and hence I impose on your courtesy, for which I thank you in advance.

IREDELL MEARES.

The article about which Mr. Meares inquires is, doubtless, the one written by Mr. Eugene Thwing of New York entitled "The League of Nations as a Moral Issue." In that article, which was reprinted in leaflet form, Mr. Thwing called attention to the fact that at the Peace Conference American ministers then in Paris sent to the representatives of the United States a request that the Peace Conference should be opened with prayer or some form of Divine service, and that the reply which they received was that there was no time for such. Based on that, Mr. Thwing wrote his article, pointing out that where God was not recognized no good could possibly come, and quoting many passages of Scripture to show that the League of Nations is contrary to the teachings of the Bible.

Dr. Len G. Broughton, one of the foremost ministers of the South, now located in Knoxville, but during the early part of the war pastor of one of the leading churches of London, has been an aggressive opponent of the League of Nations. While in Baltimore last week Dr. Broughton said that when he first began in his pulpit and elsewhere to preach against the League of Nations he was vigorously criticised, but that within the last three months there had been a great change in sentiment, and those who had criticised him were now eager to commend him. Dr. Broughton first preached in his own church in Knoxville a strong sermon against the League of Nations, and later repeated this to an overflowing, crowded house at Atlanta.

MOTION-PICTURE DANGERS.

THE Sheffield (Ala.) Standard asks as to whether the same interests that secured control of the distilleries and breweries may not be securing the control of the motion-picture industry. We cannot answer the question, but judging by some reports we hear as to some of the motion pictures displayed in different parts of this country, the rottenness of the liquor interests was scarcely greater than the rottenness of some of the pictures displayed and their influence would be almost as damaging to moral character as was the liquor traffic. The public may yet have to see that the censorship of motion pictures is very rigid.

Every Honest Man Must Have Convictions and Express Them.

A. D. REYNOLDS, Bristol, Tenn.—Enclosed I hand you my check to renew my subscription. As I have said before, you could count me as a life subscriber. While we have differed in our views on the League of Nations, I admire you for having the courage of your convictions not only on this subject, but on two other questions of the day. Long may you live as an exponent of American principles!

Aggressive Work for National Welfare by Railroads and Banking Interests Supremely Important

WITH the higher railroad rates giving an opportunity for the railroads to re-establish their credit and begin to enlarge their facilities, it is incumbent upon them to begin immediately a campaign for increasing their rolling stock to the utmost capacity of all of the locomotive and car-building plants in America, for otherwise there would be a breakdown of railroad facilities, and this would make certain a demand on the part of the public for Government ownership, which in itself would be a disaster.

We are glad to have from leading railroad officials expressions of their hopefulness as to the situation and their determination to see that the railroads do their part in meeting this emergency. Following the letters published last week from a number of leading railroad officials, we are publishing today letters from several of the foremost railroad presidents of the United States. In doing this we can but reiterate the supreme importance to the nation from every possible viewpoint that railroad men must crowd locomotive and car-building plants with orders, which will tax their facilities. Not a day is to be lost.

It is true money is high. The railroads must pay a high rate to get it. But every day's delay in placing orders will cost the railroads and the country far more than it would cost the railroads and the country to pay the high rates for money and the high prices for cars and locomotives.

This is the most crucial time, perhaps, in the history of America. We are at the parting of the ways. Democracy in its broadest sense hangs in the balance. The safety of our Government against the Bolshevistic campaign of the world depends to a large extent upon the fullest employment of every class of labor and the ability to produce and transport promptly the agricultural and manufactured products needed. Nature has been bounteous in giving us crops far surpassing what we had any reason to hope for two months ago. The movement of these crops will tax the facilities of every railroad in the country—already burdened with more traffic than they can handle.

If the Federal Reserve Board will loosen up on credits in order that production of all kinds may be increased and the railroads will immediately put forth every possible effort to enlarge their facilities with the assurance that at the very best they cannot catch up with the growth of trade during the next four or five years, we shall have a spirit of optimism throughout the land in place of the pessimism of the present hour.

This country, with all of its marvelous natural advantages, with resources beyond the power of man to quite comprehend, with more than 100,000,000 of the most virile people on earth, with nearly one-half of the railroad mileage of the world, one-half of the iron and steel and coal output, and with the production of many other things in proportion, there is no limit to the vast possibilities of development. If the banking interests of the country, and the Federal Reserve Board, will broaden their horizon and co-operate for increased activity, rather than for lessened production, and if the railroads will immediately display a broadness of vision in keeping with

the confidence which the country has for the first time in 25 years shown to railroad interests, then abounding prosperity will be ahead of us—and Bolshevism dies where prosperity thrives and Bolshevism fattens on unemployment and poverty.

The railroad managers of this country and the Federal Reserve Board and other banking interests by their action during the next few weeks will either make the spread of Bolshevism practically impossible in America, or else they will create the conditions which will develop the Bolshevistic spirit throughout the land. Immediate action to safeguard the country against Bolshevism is the supreme duty of every banking interest and every railroad interest in America.

Cheerfulness and Hope Ahead for Railroads and for the Public.

The Atchison, Topeka & Santa Fe Railway System,
President's Office.

Chicago, Ill., August 9.

Editor Manufacturers Record:

I have read with interest your editorial in the issue of MANUFACTURERS RECORD of August 5 last. I wish to say relative thereto that I believe it describes the situation exactly. The Transportation Act of 1920 is a strong constructive piece of legislation, the best that has been enacted since Congress began to take action in the matter of interstate commerce as applied to the railroads. There are certain details that should perhaps be modified in the act, but as a whole it is good. The period from the passage has been one of suspense. First, confronting the railroads was the labor question. This had been aggravated by the postponement of action by the Railroad Administration. Not only were strikes caused in various parts of the country, but the wages of crafts and labor outside of the railroads had been so raised as to cause a distinct shortage of labor and hence difficulty in obtaining the requisite force necessary to conduct the transportation of the country properly. The Labor Board has now made a decision, and it is believed that while many employees are of the opinion that it was not enough, in the main it has had the effect of equalizing the rate to such an extent that the drift of labor away from the railroads will cease and slowly begin to flow back, and it is believed further that the danger of sporadic strikes has been largely removed. The award has been accepted by the country as a whole, with the consequence that the first test of the law has been satisfactory. This, in itself, has been very encouraging to railroad officials.

The Interstate Commerce Commission promptly acted on the requests of the carriers for an increase to meet the effects of the wage decision and added sufficiently to the rates already under consideration to cover the award, and also made a grant of sufficient increase to cover all of the carriers' needs under the law to give the return provided by the law to each group. In doing this the Interstate Commerce Commission has shown itself to be in thorough accord with the spirit that actuated Congress in passing the Transportation Act. The results cannot be anything else than helpful. It removes all uncertainty as to the attitude of the Commission and throws on the executives the burden of accomplishing what is needed to restore the railroads. The task ahead of the railroads is still a heavy one because of conditions that have grown around the situation since the roads were taken over by the Government; more especially, scarcity of labor and high interest rates for money. The executives, however, can now devote themselves to overcoming these whole-heartedly, and no one can doubt the result. Each railroad officer now knows what he has to face, and is taking hold with cheerfulness and hope. It may take time; these conditions cannot be changed in a day, but we can now see the mark toward which we are striving. All we ask is that the public recognize that we cannot at once put things back that have been nearly three years going in the wrong direction, and that it have patience. With this help from the public we can see nothing but cheerfulness and hope ahead.

W. B. STOREY.

Co-operation Between All Interests Can Now Begin to Develop Increased Efficiency.

The Chicago, Rock Island & Pacific Railway Co.,

J. E. Gorman, President.

Chicago, Ill., August 11.

Editor Manufacturers Record:

My opinion as to what effect the recent action of the Interstate Commerce Commission in granting the increased freight rates will have on the railroad situation is not unlike that as has been expressed in addresses and by press articles that I have read. The prospects for improvements and enlarged facilities have certainly been made better by the recent decision of the Interstate Commerce Commission. A very large part of the increase allowed, however, will be immediately required to protect the new wage award, but it is hoped that the acceptance of the new wage scales by the labor organizations is evidence of satisfaction on their part, which will be further evidenced by efficient work and loyalty to the interests involved.

It is an acknowledged fact that the present shortage of railroad facilities of all kinds is very great, and that it will require the investment of a large amount of capital and several years of planning and work to bring the transportation capacity of the railroads up to the productive capacity of the industries that depend upon the railroads for their transportation. Further, it should be understood that the present problem is not merely the acquisition of more locomotives and cars, for if the cars are to be efficiently moved a proportionate increase must be made in all railroad facilities.

Since the railways are to be allowed to earn a return of only 6 per cent, it is evident that until financial conditions improve, the raising of sufficient capital to meet this situation is still a question for them to deal with, so we have confronting us not only the problem of bringing about the increased railroad facilities, but an immediate problem of increasing the efficiency with which the facilities now available are used during the period that must elapse before an adequate increase in facilities can be made.

The essence of the subject at present, therefore, is, in my opinion, "better service." The railway managements are already making extraordinary efforts in this direction, both through local supervision and the creation of special boards and committees to supervise the operation of all railways. While the chief responsibility in this direction may rest upon the managements of the railways, and it is obviously to the interest of the railways to secure the very greatest practicable efficiency of equipment and other facilities, the result will very largely depend on the efficiency with which the existing facilities are used by the shippers and receivers of freight, and the co-operation in this respect that they give to the railways.

To me it seems entirely practicable, through energetic effort and the closest co-operation of all interests, to so increase the efficiency of the working forces and of present facilities as to enable the railways, the business interests and the country to pass safely through the crisis that now confronts us, and I am hopeful that such may be the result.

J. E. GORMAN.

The Railroads Will Now Begin to Climb Out of Depths.

Missouri, Kansas & Texas Railway.

The Missouri, Kansas & Texas Railway of Texas.

Wichita Falls & Northwestern Railway.

C. E. Schaff, Receiver.

St. Louis, Mo., August 10.

Editor Manufacturers Record:

When the Transportation Act was passed, I felt that railroad management, the Interstate Commerce Commission and the public must share responsibility for successful operation of the railroads during the reconstruction period upon which we were entered. My feeling is not changed.

The recent ruling of the commission with respect to rates and the popular endorsement which it has met are evidences of recognition by the commission and the public of their share in this responsibility. It has established credit for a public purpose to restore earning power to railroad investment. Beneficial results

should be immediate, although it will require months to so enlarge railroad plants as to overtake transportation needs.

It is indicated that we have passed the period of public effort to take more out of the railroads in the way of service than is put into them in the way of revenue, and for the first time in a decade railroad management may undertake the expansion of facilities essential to adequate service, free from feeling that the task is all but hopeless.

The railroads, along with the rest of the country, are suffering from lack of power, equipment, enlarged terminals and generally expanded transportation capacity. Their financial disabilities have stood in the way of translating improvement plans into accomplishment. The new regulatory policy, supplemented by the commission's action and the public recognition of that action should remove most of these disabilities. Not immediately, of course, in all respects, but at least in such a degree that steady progress may be made in the physical task of upbuilding transportation capacity.

It will be a long time before normal railroad conditions can be restored. It should be but a short time until we begin moving forward. Failure on the part of railroad management to take immediate steps to provide the increased capacity, which should be possible now that regulatory authority has recorded its purpose to support constructive policies, in my opinion, will be failure to take advantage of an excellent opportunity for early stabilization of the railroad industry, as well as failure to respond to public confidence in the initiative, courage and vision of private management. I do not anticipate such failure.

The railroads cannot get out of the depths into which they had fallen in a few weeks, or a few months, but they can begin climbing. Their situation is changed from desperate to encouraging. It would be too much to expect immediate correction of the transportation conditions that make service inadequate and unsatisfactory, but it is now possible to hold out to the public assurance of improvement based on sound and practical plans.

C. E. SCHAFF.

Should Put New Life and Energy Into Great American Transportation Machine.

Southern Pacific Lines, W. R. Scott, President.

Houston, Tex., August 12.

Editor Manufacturers Record:

The increase granted the railroads by the Interstate Commerce Commission should help materially in clearing the situation that is now before the American people. It will give encouragement to many who have for years despaired, and it should put new life and energy in the great American transportation machine. The action included consideration of the award of the Railroad Wage Board, and I believe the award should be satisfactory to practically all the employees affected. The increase in rates to the railroads and the increased wages to the employees should be heartening to all concerned and immediately result in improved transportation conditions through increased efficiency of the railroad forces and co-operation of the shippers and the public.

While the railroad machine is badly crippled for want of suitable facilities, sufficient equipment, and will require the tolerance and patience of the people, if we can arrange to keep all of the cars in service for which they were designed, namely, transportation, and not for storage, prompt loading and release, prompt movement by the carriers, we will accomplish wonders, even under adverse circumstances.

W. R. SCOTT.

Increase in Rates to Result in Gradual Improvement.

Gulf Coast Lines, Executive Department.

On Texas Division, August 12.

Editor Manufacturers Record:

I have read with much interest and appreciation the editorial from the MANUFACTURERS RECORD enclosed with your favor of August 4.

I believe the increase in freight and passenger rates recently ordered by the Interstate Commerce Commission will result in gradual improvement in transportation conditions, becoming normal in two or three years.

The credit of the Southwestern lines has been at low ebb for many years, and I seriously doubt that they will establish a stable

credit and finance their large requirements as soon as the public expects. A percentage of increase equal to that accorded the Eastern lines, I believe, is justified, but some inequalities were bound to occur, and we have no doubt that the commission will make adjustments from time to time as they are found to be necessary.

J. S. PYEATT, President.

Immediate Improvement in Transportation Should Not Be Expected, But Better Things Are Ahead of Us.

St. Louis-San Francisco Railway Co., Office of President.

St. Louis, Mo., August 11.

Editor Manufacturers Record:

Kindly accept my hearty thanks for your editorial, which I think covers the ground thoroughly. In my opinion, the Interstate Commerce Commission, in granting the increase in freight and passenger rates, have been eminently fair, and their action indicates that it is their intention to place a liberal construction on the Esch-Cummins Act.

If the different State commissions will handle in the same spirit as the Interstate Commerce Commission, and will allow the rates to become effective on intrastate traffic, it will place the railroads in very good condition and enable them to secure funds for the necessary improvements. On account of the condition of the locomotives and cars, it will, in my opinion, take until the first of the year before there is a very decided improvement in the conditions. I, however, look for a considerable improvement by that time and a decided improvement thereafter.

J. M. KURN, President.

A Woman's Unanswerable Questions for the Government and Labor Unions to Study.

August 3.

Editor Manufacturers Record:

I write to ask some searching questions which those of us who answered every call of the flag are entitled to know, and which both the Government and the railroad labor unions should explain.

First, how and why was it that the call to arms by the Government, by conscription of those between the ages of 21 and 31, were obliged to answer that call, and if not, were sought out and caught, tried and sentenced as "dodgers," and whom the Government is still chasing down?

Further, even those who opposed or talked against the war and incited men to defy the conscription were dealt with even to imprisonment. This was the stringent regulation of those between 21 and 31. Now, why was it that the men not conscripted for "soldiers" or as soldiers of the Government could stand up covertly in their meetings and openly in their railroad strike and defy the Government? Who was manipulating the nation's transportation of men, munitions and freight supplies for those who were and did fight the German atrocities face to face, even with their life-blood? Why could these labor men stand up and say "we won't work at all unless you pay our demands; we will tie up the whole nation," when already they were getting more pay than the soldier boys? Instead of conscripting every "striker," they were pacified, allowed to demand and receive the higher pay.

Why could men of the nation on the railroads "strike," defy their duty in time of war, and the soldier boys could not? Why court-martial of soldiers and not of men on railroads calling themselves "labor unions?"

Further still: We women knit sweaters, socks, made hospital supplies, stood on our feet and sold "Red Cross" dinners, all a free gift of love, and the county I was in did not order even a pound of flour, but ate corn bread. Now, why was it that railroad men were a privileged class, to do as they pleased, and the "conscripted men" not allowed the same privilege?

Now, in conclusion, my young nephew was just 21, and was to receive his papers as master mechanic, and being in a plant which prepared materials for a munitions plant, he was excused from the war service abroad. When he entered the shop at 14, a stripling lad, not an older man would show the fatherless boy anything whatever in the machine tasks assigned to him unless he joined the union; so in self-defense he joined. Then right in the stormy time of Germany's fiercest drives the union decided to strike. This placed the lad in a strait betwixt two: Loyalty to

the labor union demanded that he go out with them; his honor to his flag and Government, which had excused him from going to France as a soldier, demanded that he refuse, and his loyalty to his flag prevailed, and he alone of them all refused to strike. But hear the result! That lad who stood true to his flag was black-balled and a guard had to be placed over him to escort him daily to and from his work in the plant to keep him from being assassinated. Now, that is a true standard of union doings. And every man who struck during the nation's needs during the war should be listed and recorded in the records in Washington as "traitors," for that was what they were. For if the soldier boys had no right to refuse to go to war, after the Government declared war, neither had the men who staid at home, away from German gas and atrocities, the right to imperil the nation.

And right now the outcry everywhere is utterly unreliable "service" in everything, when higher wages should bring higher services!

L. B. R.

THE SILLY SEASON MUST BE ON IN BIRMINGHAM.

"IT is not often that the MANUFACTURERS RECORD yields to lamentation and grieving over spilt milk. Ordinarily it turns its fine mind to constructive purposes and to preaching the gospel of achievement. Therefore, it ill becomes that great industrial journal to be blubbering over the fact that Leon Trotsky was permitted to leave the United States.

"In the midst of being mightily disturbed over the wars raging throughout the world, the MANUFACTURERS RECORD proceeds to say:

"America is largely responsible for all this mighty turmoil. America let Trotsky go to Russia even after we knew his mission, and Bolshevism is the red terror, warmed into life by our work and our failure to stop Trotsky when we knew his plans ere he sailed from New York. Dr. Newell Dwight Hillis has repeatedly said that after Trotsky's infamous speech the night before he sailed for Russia, urging his followers to 'overthrow the dirty, rotten American Government while he went to Russia and overturned that Government and stopped Russia's war against Germany,' the British Government held up Trotsky's ship at Halifax and urged our Government to recall his passports, but that the socialistic influence in Washington was sufficiently strong to cause us to deny England's request, so we let Trotsky go on his mission of hellish work."

"That is unworthy of the MANUFACTURERS RECORD. It is to be hoped that it appeared on the cover page without the knowledge of its distinguished editor, Richard H. Edmonds. The statement is manifestly absurd, since Nikolai Lenin, and not Leon Braunstein, is the real leader of the Bolsheviks. True, Braunstein, alias Trotsky, has been Lenin's chief lieutenant. But the people of the United States should thank their stars that this crazy little terrorist is at the heart of Russia and not the heart of the United States.

"Doubtless, whoever wrote this amazing theory appearing in the MANUFACTURERS RECORD regards his achievement as a bit of sound logic, else it would not have been played up in black type. Doubtless, too, at the time of Trotsky's departure the MANUFACTURERS RECORD was quite as glad as the Government at Washington to see the last of this raging revolutionist.

"Now, when you come to think about it, it is amazing that the MANUFACTURERS RECORD did not oppose the deportation of Emma Goldman and her crazy brood lest they should make a still mightier turmoil over there. Whatever 'socialistic influences' existed in Washington were at least rather inclined to permit Trotsky to conduct his soviet experiments over there instead of over here.

"The fact that the staid and dignified journal is on the wrong track altogether is another illustration of the fallibility of human reasoning. For one thing it makes no reckoning of the inexorable processes through which the human race must pass in its evolution. The News does not doubt for an instant that the appearance of Lenin and Trotsky, mad though they seem to be, have their own significance in the drift of world thought. Bolshevism had to have its trial in the world. Whether it shall survive in some other form, or whether the Russians themselves will spew it forth, remains to be seen."

The Birmingham News, from which the foregoing is taken, seems to have a very short vision in many respects. We can only guide our feet safely in the path of the future by knowing the history of the past. When we permitted Trotsky to leave this country during the war, when he should have been in jail, and when we knew that he was headed for Russia for the avowed purpose of bringing on a revolution in Russia in order to overthrow that Government and stop its war against

our enemy, Germany, we were guilty of a blunder so great that human language fails to express its magnitude.

Trotsky went from this country with our passport when we knew that he was going for the purpose of aiding our enemy, Germany. Trotsky, and not Lenin, has been the dominant power in the situation ever since. Lenin was at that time hiding in Switzerland. The German Government sent a special car to the border of Switzerland to carry Lenin across Germany to meet Trotsky, and sent them on to Russia to do their accursed work, and we and all the world are paying for the blunder.

We did not send Emma Goldman and the other deported Anarchists out of this country during the time of the war and for the express purpose of enabling them to break down the Russian Government, which was a tremendous factor in the struggle against Germany. But we did permit Trotsky to go during the war, though we knew his purpose.

The most amazing statement in this editorial from the Birmingham News is one that is really in effect the upholding of the Bolshevistic campaign as one of the movements through which the world must go. In the same spirit we might say that murder and all crimes are a part of the "inexorable processes through which the human race must pass in its evolution." With a paper that takes such a position as that argument is useless.

The personal reference to the editor of the MANUFACTURERS RECORD needs no reply except to say that the article mentioned was written by him, and that no article of any kind appears in the MANUFACTURERS RECORD unless written by him or with his distinct approval, and for which he is personally responsible.

WHY MEN OF HONOR AND PATRIOTISM OPPOSE THE LEAGUE OF NATIONS.

A GENTLEMAN describing himself as the Rev. W. F. Sheldon writes to the New York Times to say that the ministers as a group are going to vote for the League of Nations. He adds that "the political critics of this League speak often with their tongues in their cheeks, knowing that their criticisms are for the most part baseless, but possibly not realizing how base, under all the circumstances, these criticisms essentially are." Mr. Sheldon then drops into politics by asserting that it is "Cox and civilization versus Harding and hell."

The most powerful critics of the League have not been influenced by political considerations at all. They have been guilty of the great crime of reading the Covenant and applying to it the usual tests of meaning. A great many ministers, who are not going to vote for the League, have been sufficiently interested to discover that God and Christianity have been left out of it altogether, and that this omission was deliberate, lest any reference to Christ disturb Mohammedans and others.

As Mr. Sheldon undertakes to criticize so severely those who oppose the League, it would properly be assumed that he has thoroughly familiarized himself with the terms of the Covenant and has given it close attention. One Senator of whom we know spent days studying the treaty. We wonder if the Rev. W. F. Sheldon has even read it once.

For the South and America.

H. L. BORDEN, Lumber and Building Material, Strasburg, Va.—Enclosed find check for \$5.50 for renewal subscription to MANUFACTURERS RECORD. I have been reading your editorials, and I heartily agree with you on the League of Nations issue and the stand you take in behalf of the South.

Every Man Should Have Convictions.

P. L. ELLIOTT, Robbinsville, N. C.—I appreciate the privilege of so excellent a magazine at so reasonable a price. While I do not agree with all its assertions, yet I am glad for the fact that we have a magazine that has convictions and backbone enough to assert them.

EVERY LYNCHING IS A GREATER CRIME THAN THAT OF THE CRIMINAL LYNCHED.

HOWEVER great may be the crime which causes lynching, the crime of lynching is greater than the crime which caused it.

The criminal, vile as he may be, commits a crime against an individual, and in that way against society. But society, when through the mob it lynches a man, commits a greater crime, for it lynches the law and the sovereignty of the State. The mob crime is far greater in its effect for evil than is the crime for which the criminal was lynched. The mob spirit feeds on the lust of blood. It creates a spirit of anarchy, and wherever men commit the crime of lynching they are sowing the seeds of dissolution of society and of rottenness at heart of the community in which they live.

The natural impulse of every decent man is to do exactly as the mob does when it lynches a man; but the natural impulse is wrong. Men who give way to such a spirit of immediate revenge make murderers of themselves and plant in the hearts of their children and of the community the spirit of murder. The fearful record of homicides throughout the South is but the inevitable outgrowth of the unpunished mob which has lynched the law and lynched the sovereignty of the State.

Human life is held too cheaply in all parts of this country. The lynching spirit is not confined to the South, but wherever it breaks forth it is a crime against civilization, and there can be no regeneration of society until every member of every mob which lynches a man is punished to the extreme penalty of the law. If counties and States will not do this, then it will become absolutely incumbent upon the Federal Government to see that men everywhere have the right of trial and of protection under the law until they are punished under the law. It matters not how deep may be the passions stirred by the villainess of the criminal, the lynching of the law cannot be excused on any ground whatsoever. There are excuses which can be given without number, but the excuses are not equal to the crime. No man can possibly consider the criminality which produces most of the lynching, but by no means all of it, without feeling that he would be glad to take part in the lynching, but the yielding to that spirit is in itself a crime.

The Greenville (S. C.) News emphasizes these facts with very great force in a recent editorial, in which it said:

"About a week ago, a negro was seized by a mob at Roxboro, N. C., and hurriedly lynched on the charge of attempted assault on a white woman. No opportunity was given him to clear himself of the charge. Now, it appears from the testimony of a white man, a contractor for whom the negro was working, that he was innocent of the charge. At the time the crime was committed, according to the contractor's published statement, the negro was at work on his job and didn't get off to go to town until three hours later. If that is true, and it seems to be, the mob not only murdered a man but it murdered justice.

"The North Carolina press and public are seething with the story. The Charlotte Observer cries out that the honor of the State is at stake. There is more than that at stake. The honor of the State is besmirched and the majesty of the law trampled upon when even a guilty man is lynched. In this case justice, honor and law were lynched along with the man. The mob is a quadruple murderer.

"After all, there is no honor without justice. Honor has been defined as 'the finest sense of justice that the human mind can frame.' And where the mob rules, there is no law. In that dishonored grave where an innocent murdered man lies, honor, justice and law lie also. And the mob murdered them and put them there. Will the sovereign State of North Carolina permit them to remain there?

"We have had a mob in Greenville within the past few days. Perhaps the man they sought was guilty of the crime charged. The mob was convinced that he was. If so, he deserves the fate the mob sought to inflict. But not at the hands of the mob. Killing without due process of law is murder. The honor of the State and the majesty of the law are at stake in the punishment of the criminal. If the mob sets aside government and law

administering justice by orderly process, it has done more and worse than kill a man. It has laid violent, murderous hands on honor, law and justice.

"Lynching must be abolished. Mob rule means quadruple murder."

Every official who does not uphold the law as against the mob, even if in doing so it becomes necessary to lose his own life in the protection of the criminal, or of shooting into the mob with bullets, violates his oath of office and becomes a perjurer and a traitor to his country. Naturally people hold their hands up in horror when in defense of the criminal men in a mob are killed, but every man in the mob is himself a criminal, and the very fact that he is a part of the mob indicates his criminality. He is trying to commit murder, and if he insists upon committing murder it is the duty of the State to prevent his doing so by all the force at its command. The Governor of any State or the sheriff of any county who does not go to the very limit of protection of the criminal from mob violence, regardless of how many men in the mob may have to be shot, is helping to feed the fires of the mob spirit, and thus helping to destroy civilization itself.

The News is correct in the position which it takes that the law-abiding men in the community who do not uphold the hands of authorities in their fight against the mob spirit are themselves responsible for these conditions. It is the duty of law-abiding men to stand with the State and county authorities to the utmost limit, not that the life of the particular criminal may be saved, but that the law may be saved from lynching and the sovereignty of the State be protected.

We are fast developing in this country a wild, reckless disregard for human life, a spirit of homicide and murder, which are seriously endangering our civilization, and the failure of county or State authorities to prevent the lynching of the law and the lynching of the sovereignty of the community by the lynching of a criminal will necessarily compel the Federal Government, for the safety of civilization and the Government itself, to assume the responsibility of preventing lynching and of punishing the lynchers. It has long been a wonder that some bill has not been passed in Congress looking to this end, and when such a bill is passed Federal agents and Federal grand juries will have to see that every criminal is protected and that every member of every mob is punished to the extreme.

Unless we save this country from the mob spirit which at times lynches the innocent, as in the case mentioned by the Greenville News, as well as lynching the criminal, we shall see a steady down grade of civilization and a rottenness of society matching the worst that we hear of Russia.

TRAINING COURSES SUGGESTED FOR COMMERCIAL SECRETARIES.

THE Commercial Association for Thomas County, through its manager, S. T. Kidder, Jr., of Thomasville, Ga., has undertaken a work of much potential value in bringing to the attention of the educational institutions of Georgia the need of providing in their curricula for some course of training for commercial secretaries. Results thus far indicate that the idea is receiving the cordial co-operation of the commercial organizations of the State, and the interest manifested by the schools themselves is a gratifying sign.

In response to Mr. Kidder's letter briefly outlining the plan, several institutions expressed their sympathy with the idea, and J. M. Watters, dean of the School of Commerce of the Georgia School of Technology, wrote:

"I am very much interested in the suggestion contained in your letter of July 10, relative to courses for training of secretaries for Chambers of Commerce.

"We have courses bordering all around the work suggested. In order to complete the curricula, it would only be necessary to put in a course in the technique of the secretary's duties. In order to give such a course, as we would like to give, it would be

necessary to do considerable planning. We would want to investigate the work of chambers in the various types of communities throughout the United States. We would then base our lectures on the results of this investigation. When we offer a course we not only deal with the general economic aspects of the subjects, but we go into the practical side.

"Year before last we advertised such a course as you suggested, but the growth of the school was so rapid, and as our appropriation did not keep pace with the growth, we were forced to temporarily abandon the idea. However, at the present time, we are collecting material with this end in view.

"Under separate cover you will receive a copy of our catalog. Any suggestions that you may make relative to the work offered will be appreciated, as we desire to make the work meet the needs of the business men of Georgia as nearly as possible.

"With this end in view, it is necessary for us to take the business men into confidence and ask their co-operation in the adaptation of the work."

The reply of Mr. Kidder reads, in part, as follows:

"Essentially, all business depends on a larger conception of things on the part of the individual and consequently on the part of the community. There is a community conscience just as there is an individual conscience. In just such proportion as this conscience is awakened we have better men and women; in just such proportion as we have better men and women we have bigger conceptions of possibilities; in just such proportion as we have bigger conceptions of possibilities are we inspired to larger action, which logically is followed by a larger volume of business.

"Education is the first and primal factor. It is the duty of a commercial association to carry on this education; to lead community in thought which will have its physical result in better schools, better livestock methods, land free of stumps, better buildings for the care of farm machinery and proper housing of farm products, better agricultural credits, better markets, better homes, streets, roads, transportation facilities, better conservation of products, better and more efficient government, and, above all, more cordial fellowship each with the other.

"As a community brings these things about does it become more and more what is termed a live community. That means simply an active community.

"The secretary of an organization which is to bring about all that has been mentioned must be a man of keen conception, high ideals, business ability and ready sympathy. He must have a vision to be able to grasp the public's pulse and lead them in just such proportion as he can make them see clearly. It is the ministry of a large type, because it is practical. A man in this position can better fulfill his position if he is a sincere, open-minded Christian.

"In conclusion, therefore, a commercial association embraces every activity which makes for better men and women. Better men and women means a larger volume of business in the entire community. If there is a larger volume of business, then is every business concern gratified. Nevertheless, the real results on the part of any commercial organization and its secretary are vastly more far-reaching than that point which is decided in the development of business.

The work of a commercial secretary is not of a routine nature. If the secretary is given the proper basic training and then develops the opportunities which come to him, his influence in a community can be of immense value to the business life of that city or town, and if he has the proper moral force, he can wield a power for good that is not readily calculable.

It is hoped that the co-operation of the schools of Georgia in training commercial secretaries for their mighty tasks will be of such good effect that the State will serve as an inspiration and example in this respect to every other State in the South.

Eternal Vigilance.

E. T. TUCKER, Secretary-Treasurer Western Natural Gas Co., Tulsa, Okla.—Herewith find check for \$6.50 to cover subscription for one year from August 31. We appreciate the work the MANUFACTURERS RECORD is doing for the whole country; keep it up. "The old copy-book line that 'eternal vigilance is the price of liberty' never was more true than right now.

Six hundred thousand dollars in bonds has been voted by Hughes county, Oklahoma, for the erection of a new courthouse, a high-school building and a steel bridge across the South Canadian River at Calvin, Okla. Holdenville is the county-seat. Construction has already begun.

Senator Robert L. Owen Scores the Federal Reserve Board for Its Unwise Deflation Work Through Curtailment of Credit

[Senator Robert L. Owen of Oklahoma is so generally recognized as one of the chief factors in the creation of the Federal Reserve Board that whatever he says in regard to the Board is of special interest.

Shortly after the Board determined to begin the curtailment of credits, Senator Owen vigorously protested in a letter to Governor Harding of the Board, and he followed this with other activities, pointing out the danger that would inevitably come to the business interests of this country if the Board should continue its credit deflation as then outlined.

It is important, therefore, that Senator Owen has taken steps to bring the whole question directly to the business people of this country. We are publishing by special permission a statement which he has prepared for the Chamber of Commerce of Tulsa, Okla., with a suggestion that that organization pass resolutions requesting a change in the policy of the Federal Reserve Board in the manner indicated by him, and that that organization request the United States Chamber of Commerce to ask for a referendum vote of the various chambers of commerce of the United States, requesting the Federal Reserve Board to change its policy in the matter of restricting credits.

The paper prepared by Senator Owen has been sent us by Mr. Clarence B. Douglas, the managing director of the Tulsa Chamber of Commerce with the statement: "I am enclosing this memorandum to you for such use as you care to make of it in the splendid fight you are making for the business, the commercial and the industrial interests of America."

We take it for granted that the matter will immediately be officially brought to the leading commercial organizations of the country, but in the meantime it should be studied by all commercial bodies whose officials and leading members are readers of the *Manufacturers Record*.—Editor *Manufacturers Record*.]

By SENATOR ROBERT L. OWEN.

Eight months ago, having heard the Federal Reserve Board contemplated raising the rate of interest on the Reserve Banks. I entered a protest against it on the ground that it would have the effect of raising the rates of interest of all bank loans, municipal loans, farm loans and private loans throughout the United States, and thereby greatly increase the cost of living; would slow up production and distribution and bring about a period of industrial depression.

My appeal was in vain. The policy was adopted by the Board of raising the rates and advising the banks of the country to "deflate" credits.

Under this policy the confidence of the country has been shaken, a period of depression has taken place in some parts of the country and is threatened in all parts of the country. On the floor of the Senate I have made a number of speeches against this policy, and have put in the Congressional Record several letters addressed to the President of the United States, showing why this policy was harmful.

The argument of the Reserve Board is that credits have been unduly expanded by people speculating in stocks, by people buying commodities for hoarding.

This has a measure of truth, but the remedy for such abuses of credit should be applied individually by the banks, requiring large margins for those speculating in stocks and requiring gradual liquidation. The same should be a remedy for those buying for monopoly of commodities and profiteering. As a rule, the profiteers are not profiteering on credit, but on their own resources. To raise the rates of interest and to demand general deflation is not a remedy that should be applied. It is a gross wrong to apply such treatment to legitimate business engaging in actual production and distribution when the world is in such urgent need of increased production. If, for example, oil men engaged in production are denied credit for production, it diminishes production under the laws of supply and demand, and will not lower the price of oil. It will increase it.

Of course, the producers in extreme need might temporarily sell his product at a sacrifice to save himself from bankruptcy, but in the long run the policy is false as a means of reducing the price of a commodity. The true way to lower the price of commodities is to stimulate production, and by increasing the production the price under laws of supply and demand will be automatically reduced.

The effect of the policy of the Board is shown in breaking down the price or the market value of all sorts of securities,

especially industrial securities, and not even excepting Government bonds.

Municipalities cannot now sell their bonds advantageously, and the owners of Liberty bonds face a loss of the best security in the world of from 10 to 15 per cent, due to the destruction of credits by this policy.

The normal rates of interest in Europe for 50 years before the war were, where they do not pay interest on deposits, from 3 to 4 per cent, as in Belgium, France and England. In America, where they do pay interest on deposits of from 2 to 3 per cent, the normal rate of interest has been from 5 to 6 per cent.

Under the unwise policy of the Reserve Board commercial paper of the best quality is selling for 8 and 9 per cent, and in reality many business men, whose credits are really good, are paying from 10 to 15 per cent for money through various devices such as commissions and discounts, etc. This raises the cost of commodities necessarily and increases the cost of living.

The Federal Reserve Act was framed by the best opinion of America for the purpose of giving stability to the credit system of America, and giving a reasonable and stable rate of interest. The power of the credit system in the hands of the Reserve Banks is enormous and is now being employed, not for the purpose of stabilizing credits, but for the astounding purpose of deflating credits, breaking down confidence, and it is bringing on an industrial depression that may be extremely harmful unless promptly checked.

The banks cannot be relied upon to take the initiative because they are under the dominance of the Reserve banks and the Reserve Board, and they would put themselves in jeopardy if they should dare to assail the policy of the Reserve Board.

The chambers of commerce are differently situated. They are peculiarly the victims of this abusive power, and they can create public sentiment by making a demand for a change of this policy.

I therefore believe it would be wise to pass a resolution urging the Federal Reserve Board to restore the interest rates which were in existence before the war, and certainly to lower the rates to what they were during the war and to discontinue the policy of a general deflation of credits.

Banks extend a loan of \$10,000 to a citizen. The bank takes proper security, puts the note for \$10,000 in the bills receivable account as an asset, and then they deposit it to the credit of the citizen in the liability account. The bank demands the payment. The citizen sells his security or his commodity for deposit in the bank, pays his note and cancels \$10,000 of deposits. Thus

the credit is retired. The bank charges interest on the note for payment for giving the citizen bank credit in exchange for private credit to the extent the banks compel liquidation, then compels the retirement of deposit. This has taken place on a large scale recently. Many banks show a serious loss in deposits because of the action of their own bank or of other banks in deflating credits. The transaction is simple.

There is no sense whatever in retiring credits which are employed in production and distribution processes. This is to check business and to stop these processes just to the extent such a policy is carried out.

The banks are thoroughly justified in giving preference to those engaged in production over those engaged in mere speculation, but there is no justification whatever in denying the productive processes the credit essential to carry on the business of the country. To do this necessarily brings on an industrial depression. If this is being done with a design of stopping the business enterprises of the country and making labor walk the streets unemployed, as a means of "teaching labor a lesson," it may carry mischievous consequences of a still more serious character. It is of urgent importance that all the people of the United States should constantly be employed, and to cause men to be thrown out of employment as a means of improving the conditions of the country is not a wise remedy for the abuses which may be charged against labor in exacting too high rates for service rendered it. There are other remedies, which do not lie in the hands of the Federal Reserve Board.

Deflation.

Deflation carries with it the implication that there is an inflation of credit. This implication is false.

Inflation means the extension of credit which is unsound. The extension of credit for production and distribution to the extent of the business requirements of the country is not unsound, and the premise upon which the theory of deflation is placed being false, the conclusion expressed in the word deflation must fall.

It is true that the United States expanded its credit for war-making purposes to the extent of billions, but it was not subject to reproach. It was justified expansion, and these credits extended to the Government by individuals for the purpose of preserving the life of the nation cannot be treated as inflated credits deserving deflation. To deflate the credit extended to the Government by the individual can only be properly accomplished by payment of the debt, and this payment is more advantageously extended over many years' time than to demand immediate liquidation. To deflate the credits extended to the Government by the individual means that the individual should demand of the Government immediate payment, and this is not the contract. Moreover, to discredit the Government bonds by using a Government instrumentality such as the Federal Reserve Board is to do a great wrong to patriotic citizens who extended these credits. These bonds have been brought down from par 10 or 15 per cent by the unwise policy of raising the rates of interest broadly under this policy of the Board. I think, therefore, that the policy of deflation is based on a false conception and is already having effect so harmful that any citizen of average intelligence can clearly perceive.

Baltimore Bankers' View on Credits.

As long ago as last spring we called attention to the fact that the policy of the Reserve Board in arbitrarily applying the brakes to credit would have an effect which might not inaptly be styled disastrous, and this without materially improving conditions.—From Hambleton & Co.'s Financial Letter.

A Warning to America.

Judge Chas. E. Chidsey.

Pascagoula, Miss., August 14.

Editor Manufacturers Record:

For the past 50 years or more men of science have been teaching that a miracle is impossible, and that the age of miracles has passed. They should be living in 1920 and witness the miracle that the Federal Reserve Board is performing, viz., claiming to stimulate production by restricting credit.

And yet there is another miracle that deserves notice, and that is the miracle of men sowing the wind and hoping to escape the whirlwind. Our press, our pulpits, our State and National legislators and State and National Supreme Court are promulgating the same doctrine that was preached and practiced by the Jacobins of France, in 1789-1895, and that was the foundation of Sovietism in Russia in the years preceding 1917. That they do this unconsciously must be admitted, for very few of them know enough of profane history to know that they are teaching the same doctrine that was taught by J. J. Rousseau and Robespierre, and history must repeat herself, for a like cause must produce a like effect.

It was the teachings of J. J. Rousseau that brought on the Revolution as it was the teachings of Karl Marx that brought on the Revolution in Russia. Taine tells us that the press of France was responsible for disseminating the doctrines of Rousseau, and with characteristic vigor he calls the editors of that period "Les Courtisans de la press" (the harlots of the press), and when the storm burst it was upon ecclesiastics, Catholic and Protestant, that the madmen turned in their fury for vengeance, for rightfully or wrongfully, we need not here inquire, they looked upon religion as being mainly responsible for the tyranny of the French Monarchy.

CHAS. E. CHIDSEY.

Throttling Production.

[Sun and New York Herald.]

The Federal Reserve Board's monthly review of business conditions throughout the country is an outshining example of the results of a monetary policy which is gradually making for industrial stagnation at a time when the world is short of supplies and this country should be at the height of its prosperity. The promising word in the report is an expression of the opinion that the efficiency of labor is increasing.

Mills and factories have experienced a slackening of orders and the steel industry is crippled. Coal production is 2,000,000 tons a week under the current demand. Cancellations of orders for goods of all kinds are pouring into manufacturing centers. Crops are reported good, but as yet this is a factor beyond the control of deflation extremists.

With a total of about \$6,100,000,000 of money in circulation, an increase of nearly \$200,000,000 over last year, and an increase of probably a billion in bank loans and deposits, bank clearings are running nearly \$75,000,000 a week below last year. In this one factor lies the explanation of the present stringent conditions. The velocity of currency and credit circulation has declined and the efficiency of money exchange, and consequently goods exchange or distribution, has decreased at least 10 per cent. Since the Reserve Board finds that labor is more efficient the sag in credit circulation cannot be due to longer time requirements in turning raw products into finished goods. The distributing channels cannot bear the blame. The railroads were in bad shape last year and the year before.

One explanation remains. Credit has become a slacker because the deflation policy has killed off markets and forced the producers to take back and carry large stocks. These stocks in the hands of original manufacturers have not been liquidated in the normal way because the manufacturer is not in touch with the consumer. The effort to force liquidation with too sudden and too violent measures slowed down production as if it had its throat choked. This is just the reverse of what should have been.

Politics and Bank Control.

[Wall Street Journal.]

In an address published in the evening edition of The Wall Street Journal of August 10, questioning the validity of the Democratic claim to credit for the Federal Reserve system, it was pointed out that all that was good in the system had been inherited from the Aldrich National Monetary Commission, or injected by experts on banking like Paul Warburg. The Democrats could take credit only for the political control, patronage and paternalism which was their price for any central banking system, or for any system which would not have automatically produced a panic, as the bill originally passed by the Democratic House of representatives would most certainly have done.

In fact, after opposing the principle of a central bank in any form for a century or more, the Democratic party, its President and its majority in both Houses swallowed the pill without wry faces when it was coated over with the sugar of Democratic patronage. The danger of the Federal Reserve system, as this speaker pointed out, lies in the politics and direct political control, extending to the actual loans of any member bank, which were implicit in the law and openly expressed in its provisions, and have been so interpreted by the Federal Reserve authorities.

The Comptroller of the Currency defends restricting extension of credit to "unessentials and luxuries," but he has not answered the pertinent inquiry of the MANUFACTURERS RECORD by explaining where the Reserve Board has in any instance stimulated the production of necessities. But the paternalistic hand of the Government, acting through politicians dependent upon politics for the retention of their jobs, could work in a most dangerous way, quite apart from Mr. Skelton Williams' unneeded interference with business, which bankers understand, far better than he, how to conduct.

Through its control of rediscounting the Federal Reserve Board can call any loan made by any member bank in the United States. It can discriminate against any line of business. No member bank rediscounting any paper whatever can snap its fingers at this authority. Let us suppose an easily conceivable case. The American Federation of Labor calls another steel strike. Under pressure from labor a weak administration, like that at Washington, forthwith makes it difficult for the manufacturers in the steel trade to do business at the banks.

Is there any reason to suppose, after the experience of a terror-stricken Democratic Congress in the passage of the Adamson law, or the general attitude of the Wilson Administration in its dealings with labor throughout the war and since the armistice, that such pressure might not be brought to bear as the instigation of the American Federation of Labor if the steel companies, as they did in the past, refused to arbitrate an indefensible strike?

The Republican party can greatly strengthen its position before the voter, in the coming election, if it says frankly that this possibility should be eliminated in the future through the elimination of politics in the Federal Reserve system.

"Unessentials and Luxuries."

[The Charlotte (N. C.) Observer.]

The Baltimore MANUFACTURERS RECORD makes pertinent call for a deliverance on essentials and luxuries by the Federal Reserve Board. It is a question the country in general wants to see answered intelligently. The statement by the MANUFACTURERS RECORD is that in view of the fact that house builders have found it well-nigh impossible to secure from banks or building associations money for constructing much-needed dwellings and other structures since the Federal Reserve Board started its campaign of deflation of credit in order to break down prices, it is interesting to read in the report issued last week by Mr. John Skelton Williams, Comptroller of the Currency and a member of the Federal Reserve Board, the following:

"The action of the Federal Reserve Banks in restricting extension of credit for 'unessentials and luxuries' and in encouraging increased production of commodities most needed has been distinctly beneficial and has, it is believed, been a material influence in reducing the high cost of living far and wide. Although the application of the brakes seems to have had a jarring effect upon

some nervous systems, and has occasioned unfounded fears of a money panic and commercial crisis, there are in our country abundant reasons for confidence and encouragement as to the future.

"Those inclined to pessimistic views as to our financial situation probably do not know or do not appreciate the immensely significant fact that our Federal Reserve Banks have at this time an unused lending power of \$750,000,000, and that if occasion required the board could, by waiving reserve requirements on deposits and notes only 10 per cent, increase the unused lending power to \$2,500,000,000, which is twenty-five times as much as all the national banks of the country (which constitute a large majority of the membership of the Reserve System) were ever borrowing at any one time on bills payable and rediscounts prior to 1913, the maximum of such borrowings at any time up to 1913 having been only \$100,000,000."

"Now," is the observation of the MANUFACTURERS RECORD, "a dwelling may be a great 'luxury,' but we never before knew it was an 'unessential.' We would greatly appreciate it if the Federal Reserve Board would specifically name the things it classes as 'unessentials and luxuries' and those commodities of which it has brought about increased production. Indeed, we dare the board to try to square with the facts in regard to deflation of credit. Come on, gentlemen, let's have your definition, and not generalities as to 'unessentials and luxuries,' which you have lessened in output, and your list of commodities you have increased by your deflation work. The public eagerly awaits enlightenment.

"The public would also like to know why if there are such vast stores of credit still available in the Federal Reserve Board the business of the country is being throttled by the policy of the board in forcing all member banks to curtail credit.

"Possibly the board is beginning to comprehend the terrific significance of its unwise policy of the last seven or eight months, against which the MANUFACTURERS RECORD has unceasingly protested, and is trying to find a way to reverse itself. That it will reverse itself is, in our opinion, absolutely certain."

Alcohol from Wood as Substitute Motor Fuel.

With the increasing price of gasoline and the great demand for motor cars has come further investigation as to the practicability of using wood alcohol in some form for a motor fuel. Regular wood (methyl) alcohol as a substitute for gasoline seems to be entirely out of the question at the present time, since its market price is about \$2.65 a gallon, but there has been considerable talk about substituting grain (ethyl) alcohol made from wood for gasoline, and this may be possible if the price of gasoline goes high enough, or if this denatured alcohol which is now selling for about \$1 a gallon can be manufactured more cheaply.

"Production of ethyl (grain) alcohol from wood should receive the undivided attention of the large sawmill operators and other producers of wood waste," states the Forest Products Laboratory in a bulletin on the Development of Ethyl Alcohol from Wood.

One ton of dry coniferous sawdust or other form of waste will yield from 15 to 25 gallons of 190 proof spirit. This material in the vicinity of a sawmill or other large woodworking plant is in some cases an item of loss, and in other cases it is not worth more than 30 or 50 cents a ton; therefore, the price of raw material in a gallon of ethyl alcohol from sawdust is about 2 cents. If the manufacturing costs of producing ethyl alcohol from wood can be reduced to a figure approximately the same as the cost of production from grain or molasses, we have a large margin in the cost of raw material in favor of the alcohol from wood waste. In recent years the production of ethyl alcohol from sawdust has received a great deal of attention, and much money and effort has been spent in its technical development. Only one out of a number of plants built in this country has, however, been considered a commercial success. The Forest Products Laboratory, after a careful investigation of the workings of these plants, has concluded that "the successful production of ethyl alcohol from sawdust seems to depend upon the proper design, equipment and management of the plant rather than its chemical or fermentological features. Large volumes of low-grade materials must be handled quickly and efficiently under unusual technical conditions. The perfection of the necessary acid-resisting pieces of apparatus with the utilization of material whose mere removal at present is an expense justifies a serious consideration of the future of this industry."

Revolution by the Russians the Hope of United States and Great Britain

WILSON-COLBY NOTE TO BE DISTRIBUTED BY MILLIONS THROUGHOUT RUSSIA—WOULD OVERTHROW BOLSHEVISM BY PROPAGANDA—ENGLAND BELIEVES RECOGNITION OF SOVIET WOULD ACCOMPLISH LIKE RESULT—CLARIFYING DISCUSSION OF PROBABLE SIGNIFICANCE OF RECENT MOVES BY CHANCELLERIES.

By P. H. WHALEY.

Washington, August 16.

It is the belief of the Administration that Bolshevism can be overthrown by propaganda as a principal weapon, and in no other way. The statement of the American position, which is in the phraseology of Secretary Colby, but visualizes a policy conceived by the President personally, is the result of elaborate information received from American agents in Russia, from Boris Bakmeteff, Kerensky Ambassador from Russia, and from Ambassador Francis. It is in accordance, too, in some respects, with the very careful reports submitted to the Department of State from the American Embassy in London, epitomizing information in the possession of the British Government.

The President decided some time ago on an appeal to the Russian people. The first essential was to provide machinery for the distribution of such an appeal in Russia proper, despite the hostility and wariness of the Soviet officials. The organization of this machinery took some time, but it may be said that it is now functioning. The Colby note will be distributed by the millions throughout all Russia.

The Administration has not contemplated military intervention in behalf of Poland. It is without authority to take such action, and is not convinced that it would be effective.

The difference between the views of the British and of the American Governments can be expressly stated as follows: The former believes that the overthrow of the Soviet by internal revolution can be accomplished within six months if the Soviet is recognized; the latter believes the Soviet can be overthrown by internal revolution within six months if the Soviet is not recognized.

The American position is based on the belief that economic conditions within Russia are so frightful that a mass movement to reinstate orderly government will follow assurances that such a government would receive immediate succor from the United States and the Allies.

The British position is based on the belief that continued war, military or economic, against the Soviet will permit the Soviet to rally the country in defense of "Holy Russia," keep the minds of the people intent on war and thus prevent too great attention to inner domestic affairs. It is an old device of despotic Government to claim that the safety of the nation is involved and thus avert danger at home. It is the trick the Kaiser tried. The British are in touch with elements in Russia which maintain that they can effect the overthrow of Trotsky and Lenine by almost bloodless revolution, provided the Allies, by recognizing the Soviet, take from these two men the slogan of national safety in which they now envelop themselves.

London and Washington are pointed toward the same goal, but they are approaching it from different angles.

The British, likewise, must temper their views to the realities of their world position. It is Bolshevism as a system which endangers America; it threatens the territorial integrity of the British Empire, menacing great sections in the East. It is not yet a direct threat to India proper, it is true, but it is bursting through Persia, and they who direct the destinies of empires must scent a peril far in advance.

In these days of propaganda, when the pen is considered mightier than the sword, it is just as well not to take too seriously criticism of Poland. Her only crime is that she failed. When she had a chance to make peace with the Soviet and sought the advice of the Allies, England was still under contract obligations to Denikin, which did not expire until April 1, 1920. England, therefore, wanted no peace between Warsaw and Moscow, and so advised. It was common knowledge thereafter that the Soviet intended this summer to attack Poland. For the latter

there was no hope except to strike first. It is true that France so told her, but it was the obvious course. Nor is it any secret that London rejoiced in the early Polish successes. France believed they were permanent; England did not. Her military experts, when Polish arms were at their zenith, were almost unanimous in their belief that this was but the prelude to major disaster.

It is a peculiar thing that Bolshevik propaganda is sufficiently skillful to be able to propagate the idea in America that Poland was a truculent imperialist, bent on the acquisition of territory by force.

But it is not so peculiar if the report be true that the French agreed three months ago to put out in France propaganda favorable to recognition of the Bolsheviks, in pursuance of the British plan. The propaganda did not work in France, but there is evidence that it was tried.

Lloyd George recently announced in Parliament that the Soviet maintains a superb organization in every country on earth with the object of subverting every Government that is not Soviet. He is under no delusions as to the effort Trotsky and Lenine will make, irrespective of any peace terms they may sign, to advance through Central Europe and attempt, as did Mahomet, conversion by the sword to Bolshevik doctrine. But he thinks he can destroy the Trotsky authority at its source. He is the more prone to try that because he is now unable, and knows he is unable, to put into the field armies strong enough to stay the Red tide.

What are the inner purposes of chancelleries none but themselves know, but in Washington circles, which are intimately advised, there is a belief that the split between London and Paris is not so deep as appears. If there is going to be a peace conference, the Allies must have some trading material. French recognition of Wrangel would be trading matter of the first importance. Moreover, if Lloyd George foresees a failure of negotiations, he must be able to offer England evidence of reasonable efforts to arrive at terms. The advantage of position is something the Allies appear to have been wheedled into forfeiting, and they must regain it.

The crux of the situation is Germany. There is not much doubt that a barrier against the Reds can be economically erected if Germany holds fast. But Germany is making ready to denounce the Peace Treaty, unite with Russia and challenge civilization anew. The French have absolute information on that point, but Lloyd George feigns to discredit it. Italy, of course, having just escaped Bolshevism by direct uprising at home, is in advance of the British view, and has long been dedicated to the principle of recognition.

It is the belief of those who ought to know that England and France will be found together when the supreme test comes, since any other condition is unthinkable.

There are those who criticize the American position as "dreamy" and offering no way out. They are either not conversant with Administration facilities for propaganda work in Russia or fail to take into account the economic equation on which the Administration has depended for a solution. It would be idle, of course, to think of the American program as something material and definite, or that would stand the test of realities, or that offers a certain solution. It represents just one method of attack—what the mathematicians call a "solution by inspection." Yet when an alternative policy is asked for there is no answer. Few think that the nation would countenance the sending of our armies again to Europe. It might mean years of war. Vulnerable, therefore, though the American policy may be, in the present flux it represents about the best that can be done, perhaps. It has the virtue, at any rate, of no false attempt to paint the Soviet as a desirable thing. Bolshevism is character-

ized as it really is, so far as mere words can describe it. The dictionary of denunciation is frightfully deficient when Bolshevism is the topic of discussion.

By the "economic equation" diplomats mean that the consequences of economic causes are invariably the same. A system of government which reduces the people to a state of starvation, cuts them off from all conveniences and makes life a hell cannot long endure. Sheer desperation on the part of the masses overwhelms it. A scientific study of Bolshevism in action discloses the evidences of complete failure. These, to the trained eye, are as clear as the signposts on the road—so many economic yards to revolution, so many economic miles to a change of government. Economics is not an exact science, but the results of certain economic facts need no longer be guessed. They are assured and fixed. Men may suffer long and patiently under tyranny, but when the stomach begins to rebel, political orations and theories cannot hold. They yield to the cry for bread.

It is possible for a false economic system to endure a long time—until it consumes the stored riches of the nation involved. But the draining of the reservoirs has been almost completed in Russia. That is why the Red beast lunges into new territory. That is why he cannot be stopped at Warsaw. Poland would support him for but a period. Thereafter, whether he wished or not, he would be forced to devastate new fields. It is idle for Lenin to promise that his armies will go so far and no farther. They must go farther, or the system that supports them must fail. All Bolsheviks know this.

It becomes, therefore, a race to determine whether the Soviet can be overthrown at home before it can spread over all central Europe. England believes it can, America believes it can, and France is doubtful.

Moreover, a feature of the situation is the facility with which the Bolsheviks succeed in destroying the morale of their opponents before battle. Theirs is the tempter's voice, and it sings to the proletariat of the opposing armies. There has been contamination not only in Italy and in France itself, but in England the voice of labor is heard issuing ultimatums to the Government. It is Bolshevism not only in the field but at home which has to be watched. For Bolshevism is the conspiracy of Cataline universalized and promising to the mass the accumulated wealth of 20 centuries as booty.

Another feature of the situation is the fact that the German dye industry has been left intact, is stronger than ever and could supply Red armies with almost limitless supplies of death-dealing gases—some discovered just as the armistice was signed. Some of the German arms and old-time munitions of war have been taken from her, but she has been left with the most deadly paraphernalia of modern warfare—her chemical industry. There is not in Europe today, therefore, in all probability, any association of military powers which could beat back promptly a Hun-Red attack before it reached the Rhine.

Among military men at the Capital there is no delusion as to the extreme seriousness of the situation. What America and England are trying to avoid is a military solution. France thinks that a military solution is the only solution, and that it is best to have it now. But she cannot attempt it without British and American support.

There is a difference—a vast difference—between the Soviet menace and the attacks of other hordes on civilization. The latter, except the Saracen attack, were not the assaults of an idea, but were elaborate adventures in banditry. The Soviet advance is banditry, but it is also the march of a system, and that system is not religious in character, but is economic. It is defiance of God, defiance of society and defiance of human nature. It cannot, therefore, ultimately endure, any more than the human body could endure if deprived of food and drink. But, like all experiments over a vast area, time becomes the umpire. The downfall of Bolshevism is inevitable, but the problem is to bring that downfall about before the damage to civilization has become irreparable.

The outlook is for a Soviet Government in all the Russian border States, in form independent, a possible negotiated peace, not intended to endure, and either of two alternatives—overthrow of Sovietism by the Russians themselves at home or a general European war with Huns and Reds in alliance against Western Europe. The plans of both the United States and Great Britain are tied to the hope of revolution.

Natural Gas Development in Central Texas.

The Chamber of Commerce.

Brownwood, Tex., August 10.

Editor Manufacturers Record:

The Brownwood (Texas) Gas Co., of which Mr. W. A. Letson is president, is the owner of the entire gas output in the Desdemona field, as well as that in a territory some 12 miles southwest of the city of Brownwood. Lying between these points, a distance of over 100 miles, are situated the cities and towns of Brownwood, Comanche, Dublin, Stephenville, DeLeon, Gorman and Desdemona, with a number of smaller towns and villages that will undoubtedly take advantage of the opportunity to obtain natural gas for domestic as well as power purposes. The supply of gas at both points is very large, aggregating now some 100,000,000 cubic feet, and subject to further development. At the Brownwood end there are six wells drilled, cased and capped, and but one of these has been used to furnish fuel to the city of Brownwood. This well has been in use for over two years now, and shows practically no diminution in rock pressure, the original index of 500 pounds being fully maintained by test.

At the Desdemona end there was, prior to Mr. Letson obtaining possession of the gas output, a tremendous waste, caused by the driller's desire to exhaust the gas in the hope of oil following. All this has been stopped. The wells, some nine in number, have been carefully cased and capped, and every means has been taken to conserve the supply, with the result that the rock pressure has increased marvelously in that field, and with the assurance of official co-operation in the conservation of this gas for the future, the Desdemona field would appear to be as promising as the field to the southwest of Brownwood.

The needs of the city of Brownwood have hitherto been fully met by means of a 5½-inch pipe to the field to the southwest, but industrial growth necessitates a larger supply now, and the company is laying a 10-inch main to the city, which will provide 15,000,000 cubic feet daily, which is calculated to be enough to furnish Brownwood with gas for all purposes, figuring upon 100 per cent increase in population in the next 10 years, an estimate justified by the growth of the past decade.

In addition, it is the purpose of the company to connect the Brownwood supply with the Desdemona field by means of a 10-inch line, so that the cities lying between these fields will always have one source of supply available in the event of a break or any interference with the supply at either end.

The city of Brownwood has granted a franchise to the Brownwood Gas Co. with a 50-cent rate for domestic purposes, leaving the industrial rate at the discretion of the company. That this was a wise provision is indicated by the experience of one company alone, whose coal bill used to be \$3600 a month, with the labor bill incidental in addition, but whose bill for natural gas now is around \$2200 per month, with the labor bill entirely eliminated. This and a number of other industries obtained their supply through the 5½-inch pipe now being supplanted by the larger main.

The value of this inexhaustible supply of dry natural gas, at a period when the supply of other fuel is entirely problematical, taking into consideration the great desirability of this section for both living and manufacturing purposes, can hardly be estimated.

J. W. DUNN, Secretary.

Southern Petrinite Co.'s Plant Completed.

During the coming week production will begin at the plant of the Southern Petrinite Co., De Funiak Springs, Fla. This company has a 115x84-foot wooden building costing \$4000, gas engine for power, centrifugal pumps to convey sand from pit to plant, machinery with daily capacity 16,000 bricks or equal quantity in hollow blocks, hollow tile, building stone, floor tile, roofing tile, wainscoting, etc., besides Petrinite plaster compound and Petrinite waterproofing for old concrete work. This Florida company was organized as a subsidiary of the Formby Petrinite Co., Washington, D. C. W. H. Stayton, president of the Baltimore Steamship Line, is president, and George M. Formby, De Funiak Springs, the company's construction engineer, is among the directors. Subsidiary organizations will be formed throughout the various States.

How American Revolutionary Propaganda Works*

A SUMMARY OF THE PAMPHLETS DISTRIBUTED TO THE EMPLOYEES OF A BROOKLYN SHOP.

Among the employees of most shops in the United States, among railroad men and other workers there is in daily, hourly circulation a mass of revolutionary propaganda.

In the belief that few employers see this literature or know to what extent it is reaching the workers, this summary is made of a series of pamphlets distributed to employees in a Brooklyn shop.

There are said to be above 3,500,000 members of labor organizations. Their meetings are frequent and well attended. Only in rare instances is there anything of a seditious nature in the proceedings.

But for the past six months or more outside and inside workers have been handing to each attendant at labor meetings the pamphlets described here and others of similar nature. The same literature is distributed in the shop and in the workers' homes.

The extracts here reprinted have been taken from a series used to promote the movement which it was hoped would result in the stoppage of all work on May 1.

The Opening Wedge.

The first pamphlet the worker received was a sheet addressed to his particular industry, and in that there is found the preamble of the Industrial Workers of the World. This gives the foundation upon which the structure is built. It declares:

"The working class and the employing class have nothing in common.

"Between these two classes a struggle must go on until the Workers of the World organize as a class to take possession of the earth and the machinery of production, and abolish the wage system.

"Instead of the conservative motto, 'A fair day's wage for a fair day's work,' we must inscribe on our banner the revolutionary watchword, 'Abolition of the wage system.'"

The idea expressed in this preamble is intended slowly to seep into the mind of the workman—to bring before him a vision of the elimination of all bosses, direct participation in all the proceeds, and to some of the workmen who have no knowledge whatever of manufacturing and merchandising a commodity it doubtless appears as a simple solution of all industrial troubles.

The attempt is made to lead the worker to believe that labor is the only ingredient or at least the only important ingredient in any production, and if such is the case, why should he not take all of the benefits to be derived from labor?

The Second Step.

He then receives another pamphlet in which in large type these expressions appear:

"VALUE OF INDUSTRIAL ACTION."

"WE CANNOT SUCCESSFULLY MEET THE WELL-ORGANIZED EMPLOYERS WITH THE ANTIQUATED TRADE UNION METHODS."

"UNITED INDUSTRIAL ACTION under which an INJURY TO ONE MEANS AN INJURY TO ALL."

"ALL POWER TO THE RANK AND FILE."

He begins to appreciate the value of united industrial action.

His mind is expected to travel along this path until it shall suddenly dawn on him that here is a powerful agency that can dictate to the world if the system can only be perfected.

A Third Jolt.

The following week he gets a leaflet in which the foregoing sentiments are emphasized and a new thought is added.

"REVOLT, SECESSION AND REORGANIZATION are in progress."

"Do you desire to see forces of the workmen scattered or do you wish to see ONE GRAND UNION for all the workers?"

"There is one enemy to the working class—the Industrial Barons, the exploiters. There is room for ONLY ONE INDUSTRIAL UNION."

*From Notes and Clippings, published occasionally for private circulation by Ivy L. Lee and associates of 61 Broadway, New York.

"Act Together—Unite Together. We will stand Together and Fight Together for the Day of Industrial Freedom."

The workman may have been contemptuous in the beginning, but the constant application of these ideas is likely to obtain a certain hold on him.

The cost of living is pinching him, and if he was not dissatisfied in the beginning, perhaps now he begins to feel the injustice of it all.

And Fourthly.

Leaflet No. 4 is placed in his hands. In large type it says:

"REAL WAGES ARE BEING REDUCED, OWING TO THE LESSENED PURCHASING POWER OF MONEY. YOUR STANDARD OF LIVING IS BEING DAILY LOWERED BY THE FACT THAT YOUR WAGES ARE NOT KEEPING PACE WITH SOARING PRICES."

He is told in the same pamphlet that this can be corrected only by an organization aiming steadily at the complete overthrow of the capitalist wage system, and formed in such a way that all its members in any one industry, or in all industries if necessary, cease work whenever a strike or lockout is in effect in any department, thus making an injury to one an injury to all.

He is told to study the plant of the Workers' International Industrial Union. This organization is plotted for him on a chart as follows:

The Workers' Industrial Union.

The head body is known as the International Bureau of the Workers' International Industrial Union. It is divided into the American, Australian and British administration, etc.

Underneath this group comes the General Organization of the American Branch; below that comes the Department of Industries; below that appears the National Industrial Union of each industry, and subdivided from that comes the local Industrial Union to which the workman belongs.

In passing it should be noted that the actual power of the executive head of this institution is not the American Organization, but the International Bureau, probably located in Russia.

"Showing the Bosses."

The same literature was given to workers in many of the industries in this city, and the pamphlet entitled "STRIKE" is significant in that it was used not only with the switchmen, machinists, dock workers, miners, but it has been freely distributed at all kinds of labor meetings.

"They are all striking—railwaymen, machinists, dock workers, miners, elevator runners. They have tied up transportation and crippled industry. They are showing the bosses what they can do when they stick together."

In this sheet the American Federation of Labor is attacked. "For years the leaders from Sam Gompers down have played a slick game by splitting the unions into as many parts as they could. This has given them a hold on the unions, given more jobs to the union politicians, and given the bosses a whip over the workers who could never strike together."

"Put an end to the capitalist system and the capitalist government. Form Shop Committees and Workers' Councils for agitating and organizing. Establish industrial unions in the different industries and join them into ONE BIG REVOLUTIONARY UNION OF ALL THE WORKERS to fight the Bosses and their Government."

The workman's mind is to be carried another step forward. He is to be taken away from his old union. He has been told that the old union is working with the bosses and he can expect no relief, and he is finally assured that the revolutionary union, composed of all the workmen, will have strength enough to fight not only the bosses and other unions, but will be actually strong enough to fight the United States Government.

The worker is not told that this quarrel is with the Government until his mind has been fully prepared for it, so that it does not

come with the same shock that it would have come if he had been told this in the beginning.

Labor the Master.

Prior to the first of May he was handed various pamphlets urging him to stop work on that date. The pamphlets read:

"If you would have it that Labor shall come into its own;"

"If you would have it that Labor shall be master of its own life;"

"If you would have it that Labor shall be free from wage slavery;"

"If you would have it that Labor shall triumph over Capitalism"—

"THEN SHOW IT BY UNITED ACTION—Let every worker stop work on May first and declare his solidarity by celebrating the International Labor Day."

The striking thing about the final document in this series is the direct connection established between the Industrial Workers and the Communist Labor Party of Russia. This is the connecting link—the first document to come out clearly and openly with the thought that the ONE BIG UNION is the same organization as the Communist Labor Party and the Russian Bolsheviks.

Up to this point there has been no reference to Russia as a source of inspiration to labor. But now we are told that:

"The sun of Communism is rising in the east.

"From Russia its invigorating rays are awakening the Proletariat of the world."

"The revolutionary advance guard of the Proletariat calls upon the workers everywhere to break the bondage of economic and political slavery and demonstrate for the cause of real freedom.

"Finding the capitalist governments in a conspiracy to crush the Workers' Republic of Russia, it becomes our task and duty to direct our demonstration on May first against this murderous conspiracy." * * *

All Power to the Workers.

All Industries to the Workers.

Long live the Social Revolution.

COMMUNIST LABOR PARTY.

There is only one method of combating the influence here exerted, and that is education. The man who works with his hands is not different from the rest of us. He may have less education, but he is human; his problems are just as important to him and he responds just as quickly to reasoning and influences that he understands.

The average workman cannot avoid this propaganda. It is being fed to him constantly and from all angles. The economic conditions are such that discontent is general, and this is the only method of relief that he has been told about by those who speak his own language.

The counter-revolutionary propaganda must be as easily understood. It must be based upon fact and fair dealing.

Lacking effective opposition to the effort here illustrated, the ground it has already gained will be steadily extended.

Bartering Our Americanism for Old-World Pottage

DISOWNING THE BIBLE FOR GERMAN SCIENCE AND SOCIALISM IN OUR SCHOOLS.

By LIDA B. ROBERTSON.

A statesman of South America declared: "The United States was settled by people seeking God; South America was settled by people seeking gold; and now behold the difference in the two continents!" Our whole history attests the truth of his utterance.

Nevertheless, we have allowed aliens "seeking gold" to pour into our free country, throttle our day of worship into godless desecrations for gold, and have permitted them to expel the great Book of Morals (which our forefathers lived and taught, and impelled this short-lived nation into the forefront of the world) from our teachings and school curricula, and substitute in its place every conglomeration of German science that can be injected into textbooks, teachers' colleges and universities, the very "science" which turned Germany into the monster demon of atrocity and plunged the whole world into want and woe. Therefore, it is no surprise at all that "college professors" want to vote for "Debs" and schools and colleges are hotbeds of socialism, Bolshevism, etc. We always reap what we sow.

Millions of our money is teaching "scientific" German propaganda to destroy us and overthrow our Americanism in textbooks, school libraries and universities, and not one line of the Book which made us a great nation, nor one line of civil law itself, such as petit larceny, criminal assault, forgery, perjury, postal laws, etc., and their penalties, to train respect for law and order, as an American patriot. The hope of a nation is its young, and we are training up young Germans, not young Americans, for we have repudiated our Americanism of faith in the Bible and in the true God for German scientific agnosticism and psychology.

To prove my arraignment, herewith are given facts which any American can verify by investigation:

When the flu raged I substituted for the ill teachers in the Thomaston (Ala.) High School. My first lesson with the class in Early European History, by Robinson and Breasted, a widely used textbook, every sacred American ideal in which I had been reared was shocked. I looked into the faces of these boys and girls, every one of them from Christian farm homes, native-born

Americans, whose parents at great sacrifices were doing without them on the farm to educate them, being dragged backward by the German pulley of "science," not over the 6000 years of real history, but into "pre-history of Stone Ages," in which "early man" was a prowling idiot without sense or speech (a monkey, but they dared not say so), violative of every Bible truth taught by our first Americans. The book boldly attacked the Bible as a string of tales strung together by wandering Hebrews who had to go to the Canaanites to be "civilized" when they had lived 400 years in Egypt, the then most advanced heathen nation in the world; that Moses did not write the Books of Law, the author was unknown. Overwhelmed at teaching such stuff to our young Americans, I examined the book to find 10 "scientists" from German, Austrian and other foreign universities thanked for their sketches and cuts, which had been used in the book. And Strasburg itself, which had appealed to the Upsala University of Sweden to enter protest to the United States against France's order that the university be vacated in 24 hours of all Germans, "as a menace to scientific research." Contemporaneously to my shock over German agnosticism in our school books for young Americans appeared the fine reply of Nicholas Murray Butler in the public press spurning the appeal and listing 30 "atrocities" of which German arms had been guilty, especially the burning of the Louvain University, and asking Strasburg University had they entered a single protest? I forthwith wrote to Mr. Butler highly commending his reply, and added that it was a colossal travesty for us to be denouncing "German atrocities" in warfare and teaching German propaganda in our textbooks to our young, when German science had hurled Germany into becoming the monster demon of atrocity of all history, having used her "science" to perpetrate it, and not implements of war.

And with these facts we cannot be surprised at strikes, disloyalty and "dangers ahead" when we have and are bartering our inherited American birthright for German pottage: Repudiation of the Bible, which requires corrective self-control, mercy and love, and substitutes mere philosophy and psychology in its place.

Boston Banker Takes Encouraging View on European Situation— Three Months' Study of Conditions Warrants Optimism

By JOHN BOLLINGER, Vice-President National Shawmut Bank, Boston.

That the future is far from being as black as some reports would paint it; that the situation throughout Western Europe, at least is, in fact, distinctly encouraging, is my impression based on three months' study of the business and financial situation in Europe.

"Progress toward readjustment throughout Western Europe is more general than some of us may believe. I was particularly struck by the interest manifested throughout Great Britain in the coming elections. They are not so much interested in the success of one or another candidate as they are anxious to see the signing of the Peace Treaty, which they regard as essential to any general undertaking leading toward improvement. There seems to be a strong current of unfavorable opinion as to the attitude assumed by President Wilson in making the signing of the Peace Treaty dependent upon the acceptance of his views with regard to the League of Nations, thereby delaying actual peace for a full year. That English merchants should be, to some extent, disturbed because of our progress in foreign commerce is but natural. The recently enacted merchant marine law has given British merchants and shippers considerable concern. Far-reaching and comprehensive plans have been formed, with the backing of the Government, to meet the growing competition of the United States.

Among the European countries involved in the war, Great Britain has been most successful, since the signing of the armistice, in carrying out plans for the restoration of her former position in international commerce. Commercial relations have been quite solidly established and active trade in considerable volume has already begun with the Central Powers, Germany, Poland and Czechoslovakia. Important advances have been made toward securing the future trade of the Scandinavian countries. Great Britain continues to maintain the attitude of an ally, and to that extent is generous in her support of their efforts toward reconstruction and rehabilitation.

The carrying out of this broad constructive program necessarily involves the extension of credit facilities in large amounts, and on every occasion it has been found that the British banks are courageously facing their responsibility in the matter of extending credits.

One very noticeable difference among British banking institutions, as compared with our American banks, is the freedom from hampering restrictions generally enjoyed by the British banks.

There can be little question that Great Britain's relatively strong financial position is largely due to the freedom of action enjoyed by her financial institutions. British banks are always in position to give adequate support to their international commerce in the full assurance that their efforts will be unhampered and that they can always count upon the solid backing of the Bank of England.

It is quite remarkable how Belgium has come back to its pre-war position. The Belgians, unlike their French neighbors, went to work immediately after the armistice rebuilding their wrecked homes and factories, and within a comparatively short time their industries were in full swing. Probably about 80 per cent of the devastated Belgian villages have been rebuilt; the war has been forgotten, and the industrial population, and, in fact, everyone in Belgium, is hard at work. Weather conditions since last winter have been very favorable, and this good fortune is reflected in her agricultural activity. Every available bit of Belgian soil has been planted, and all of the crops for this year are very much better than any average crop of the pre-war period. The importance of this showing can be better appreciated from the statement that the Belgians will supply this year about 70 per cent of their own food requirements. With regard to their foreign business the same activity is apparent. I have been advised that Belgian exports during the first four months of this year considerably exceed their imports. While such a record is distinctly encouraging, it should be remembered that Belgium's heavy importations of raw materials and foodstuffs were made during the latter part of the past year.

Taking everything into consideration, France has made phenomenal progress in the rehabilitation of her industries and in the reorganization of her commerce. There appears, however, to be a

rather general opinion that France's task would be further advanced but for her seeming reluctance to devote her entire energies to the work of reconstruction immediately following the armistice. Almost a whole year was lost to her through delay in the negotiation of the Peace Treaty as a result of her elections. In some quarters there is a tendency to charge up a portion of the delay in the Peace Treaty as a matter for which we are to some extent responsible. Those who take that particular view express their disappointment that President Wilson, by his insistence on his definition of phrases in the League of Nations Covenant, contributed to the postponement of final acceptance of the treaty.

France, like Belgium, is fortunate this year in having a very large, fine crop of grain. It is expected that her crop returns will result in a saving to her of hundreds of millions of dollars for wheat and other food products, which, had her crops been poor, she would have been compelled to import from the United States.

Some criticism has been directed by certain elements among the population toward the unsatisfactory financial condition in which the French Government has been placed. This situation is largely the result of disinclination on the part of the Government to adopt at once a policy of high taxation on the people of France. Cause for reproach on that score no longer exists, however. The new taxes, now levied upon every citizen of the Republic, give ample promise of a revenue more than sufficient to cover the ordinary expenses of her budget. Belief that Germany would pay large indemnities is in great measure responsible for France's reluctance to charge herself with amounts which might properly be secured from Germany. The desire of the contesting political parties in the recent election to avoid the suggestion of huge tax burdens upon the community was also a factor in delaying the adoption of a practical plan of taxation. Nothing speaks more eloquently of the courage of the French people or gives greater promise of the ability of France to successfully overcome her financial obstacles than the uncomplaining acceptance of this tax burden.

Speaking broadly, the financial condition of France, Belgium and Great Britain may be regarded as distinctly favorable. It is true that there was a tendency toward high money rates in England during the early part of this year. Higher rates had also begun to prevail in Belgium during the spring. In France there has been no marked activity in money rates, and they are, in fact, but slightly higher than normal at the present time. It is readily possible, nevertheless, to foresee considerably higher rates for money this fall, not only in Great Britain and Belgium, but also in France. The possibility of higher rates of interest is not of itself to be regarded as suggesting any reason for alarm. They will be but a reflection of heavier demands for funds, and, in my opinion, may be considered as a healthy sign in so far as such increased demand for funds shows increasing industrial and trade activities.

With regard to foreign exchange rates, it is quite probable that we will find them seeking a much lower point than their present level before the end of the year.

It is quite natural, of course, to anticipate that a certain decline in exchanges should result from our heavy exports of raw materials to these countries, particularly of cotton and grain, which will go forward in large volume during the remainder of the year.

With regard to existing financial conditions in our own country, the continued tightness of money would seem to indicate that our transportation facilities are still considerably behind in the moving of merchandise. The recently granted rate increase holds out some hope for improvement in this particular, although, with the very best of success, there is little immediate benefit to be hoped for from that source. The large size of our crops this year, and consequently increased demand for financing their movement, must prove added factors among the influences which will make for tighter money during the coming fall.

In giving consideration to the immediate future we should not lose sight of the fact that the securities market also must be supplied with funds. Securities are at the present time selling at such a low level that a loss of confidence in securities on the part of investors generally might seriously endanger the successful flotation of new issues.

The Only Safe Way to Americanize the Foreigner and Lessen Labor Agitation

The radical agitators accomplish the greatest results by circulating among the employees of industrial plants and in their speeches delivered at labor meetings.

This type of agitator has not hesitated to preach his doctrines with persistency and determination, and as he has generally met with but little controversy on the part of those who did not agree with him, he has been able to steadily win converts to his doctrines. Such agitators have not hesitated to use every device known to continuously "bore from within," both for the purpose of influencing and controlling the attitude of workers in plants and also through the labor organizations to which these workers belong. Here and there are evidences that patriotic workmen have stood up for the true type of American labor and have taken issue with these agitators, but these cases are rare compared with the large numbers where dangerous doctrines are being preached without interference.

To meet the radical agitation a movement has been under way under the auspices of the Moody Bible Institute to develop "agitators for righteousness." In a two-page advertisement in this issue the Institute illustrates and describes the type of men of all nationalities they are developing to carry on the work as "walking delegates" or "agitators" for the Gospel of Jesus Christ. The kind of work being done by the Institute in this connection is well illustrated by the reproduction of a photograph of a group of these students, about each of whom a few facts are given below, showing their nationality, previous history and their aims and purposes.



1. PORTO RICAN.

F. B. Colon, age 25. Preaches Sunday afternoons to Mexican track and roundhouse men on Southwest side, employed by the Santa Fe Railway Co., and does house-to-house visitation in their homes; also holds a class in English for them Friday evenings. Is training for work among Spanish-speaking people.

2. IRISH.

S. G. McGuigan, 42. For many years an infidel, radical agitator among workmen of Pacific Coast cities. Now soundly converted, preaches in the missions, and is training to evangelize men of his class.

3. AMERICAN-BOHEMIAN.

Frank R. Filck, 20. Deceased, April 11, 1920.

4. SWEDISH.

Harold L. Lundquist, 25. University of Minnesota graduate. Abandoned law practice in Minneapolis to train for the ministry. Preaches in jails, missions and churches.

5. ENGLISH.

Harry G. Briault, 29. In U. S. Secret Service during the war. Visits jails and hospitals, and teaches Bible class at Mayfair.

6. CZECHO-SLOVAK BOHEMIAN.

Frank J. Brdlik, 23. Superintends Sunday-school of First Bohemian Baptist Church, teaches Sunday-school class and holds open-air meetings. Preparing for life work among Bohemians.

7. SCOTCH.

L. D. Ballingall, 39. Has been dry goods buyer for foremost department stores of Montreal, Toronto and Detroit. Is training for the ministry. Preaches in Christ Congregational Church, teaches a Bible class and also a training class.

8. ASSYRIAN.

P. O. Daniels, 26. Attended Presbyterian Mission College in Urmia, Persia. Preaches at Carter Memorial Assyrian Chapel; leads their young people's meetings and Saturday afternoon choir; teaches Sunday-school class and does visitation work. Was in the army.

9. SOUTH AFRICAN.

Alfred P. Gibbs (English descent), 30. Preached in spare time for six years at Johannesburg to natives employed in the mines; also to South African troops during the war. Teaches two Bible classes, conducts gospel meetings and gives stereopticon lectures on Bunyan's "Pilgrim's Progress." Preparing for the ministry.

10. RUSSIAN JEW.

Moses Gitlin, 24. from near Odessa. Speaks Russian, Hebrew, Yiddish and English. Holds class in English for Russians at Marcy Center five nights a week, and a gospel service Saturday evenings. Preaches to Jews on West Side Sunday night; speaks and sings at Russian service, West Division Institute, Sunday afternoons. Training for work among Russians.

11. ITALIAN.

Michael Maletta, 22. Does open-air gospel work among Italians in "Little Hell," teaches a large class of Italian young people in Moody Italian Mission, of which he is assistant superintendent. Also superintends Italian Sunday-school of the Trinity Reformed Church. Training for work among Italians.

12. CANADIAN.

J. R. Stephenson, 29. Fifth of his family to train in the Institution. Does visitation evangelistic and Sunday-school work. Preparing for ministry.

13. DUTCH.

Bert Sprick, 29. Owns a farm in Michigan and has worked in lumber woods. Conducts mission and a Sunday-school in West Side Italian district, and does house-to-house visitation. Training for work in rural districts or lumber camps.

14. CANADIAN.

Norman W. Taylor, 25. College man, Lieutenant and then captain in Canadian Air Service in France during the war. Dubbed "Horse-shoe Taylor" by comrades because of many narrow escapes. On one occasion, after encounter with enemy squadron, returned unhurt, with his pilot, with seventy-two bullet holes through plane and their clothing. Shot down three times, landed safely and got away. Teaches Bible class, superintends a Sunday-school and leads an evangelistic group. Preparing for ministry.

15. RUSSIAN.

Stephen Shepul, 28, from Grodno, six years in America. Working among Russians. Opened a mission in Argo, Ill., in which eleven Russians were converted. Preaches to Russians Sunday afternoons at West Division Institute, Sunday nights at Russian Evangelical Mission, 14th and Halsted streets, and Saturday nights at Marcy Center. Visits house to house among Russians nearly every night and distributes tracts for Chicago Tract Society. His family was recently reunited in Grodno. One brother returned from German prison camp totally incapacitated for work; a sister returned from Austria, where she had been imprisoned for two years; another sister

returned from Siberia, where she had fled to escape the Germans, and another brother had just returned from service under General Yudenitch.

16 and 17. NORWEGIAN.

Oscar S. Weltzin, 22. Evangelizing in jails and churches, and by tract distribution. Preparing for foreign missionary work.

Bernhart Rom, 28. In United States ten years. Serving as pastor of Emmaus Evangelical Free Church (Norwegian). Preaches Sunday night, superintends the Sunday-school, leads young people's meetings and does house-to-house visitation. Is preparing for the ministry.

18. FRENCH.

S. E. Bernhardt, 20. Converted under Paul Rader. Does house-to-house visitation, conducts young people's meetings, distributes tracts, etc.

19. AMERICAN NEGRO.

Toliver Chisum, 42. Had a grocery at Memphis. Training for work among negroes. Now assistant pastor at Calvary Baptist Church; also holds open-air meetings.

20. SYRIAN.

Albert C. Hakim, 26, from Homs, a day's journey from Damascus. Attended mission school in Homs. Converted through Salvation Army in New York. Gave up large business prospects for Christian work. Preaches in churches, open-air and factory meetings and missions. Training to be an evangelist.

21. JAPANESE.

K. Hirakawa, 52. In Seattle about twenty-seven years. Converted fifteen years ago. Taught ten years in Japanese Sunday-school. Preparing for work as pastor of Japanese church on coast.

22. FINNISH.

Yrjo Nummi, 31. Had four and one-half years in Helsingfors University. High-school teacher. Worked seven years as assistant pastor of Finnish Seamen's Mission, New York City. Preaches Thursday and Sunday nights to Finnish congregation on North Side, visits from house to house and holds neighborhood meetings for Finnish families. Preparing for foreign missionary work.

23. ARMENIAN.

Louis J. Yelanjian, 23. Joined his father in America shortly before the war. His grandparents, mother, two brothers and a sister were deported by the Turks from Angora to Aleppo, seventy days on foot, and all perished from abuse, starvation and disease. Preaches and sings in missions and at U. S. Machine Shop noon meetings. Preparing for foreign missionary work.

24. GERMAN-BOHEMIAN.

A. Stury, 25. German high-school education, also took agricultural course at University of Wisconsin. Visits jails and factories, plays violin in orchestral group and distributes tracts. Preparing for foreign missionary work.

25. GERMAN.

J. J. Berner, 30. In United States fifteen years, served in army medical corps overseas, and taught Bible classes in the army. Works in Chicago Hebrew Mission, in jail meetings and in hospitals. Preparing to return to Germany to preach the gospel.

26. AMERICAN.

Toward Loralne, 24. Clerk in Navy-yard at Philadelphia during the war. Preparing for foreign missionary work.

The purpose of the advertisement is to solicit funds for more broadly carrying on the work, but the encouraging thought that is drawn from this commendable work is that there are sound agencies in action which have for their purpose the training of men who will be able through the doctrine of righteousness to meet the radical agitator wherever he may be and counteract through wholesome, religious and patriotic talks the great evil which has been spread among the workers of the country.

The Plans and Purposes of a Negro Industrial Organization as Told by One of Its Leaders.

Southern Federation of Afro-American Industrial Brotherhood,
Rev. P. Colfax Rameau, President.

Birmingham, Ala., August 10.

Editor Manufacturers Record:

My people are very grateful to you for the real democratic American comment that you made on the article written by myself and published in your edition of June 17.

I am sure you said right when, speaking about the ignorance that makes up the ministry in the South among my race, and who today constitute the greatest stumbling-block to the progress of the race, because they are so very ignorant of the economic philosophy of industrial life of the South that they are ready and willing at all times to be the cat's-paws for those unscrupulous Northern labor agitators who have wormed their way into every nook and corner of the industrial fabric of Dixie.

I am sending you an outline of the object and aim of the Southern Federation of Afro-American Industrial Brotherhood, and if the leading class of the great Anglo-Saxons of this land of Dixie will through the bigness of their hearts get wholeheartedly behind this "industrial race organization," the negro will be saved from the clutches of this Bolshevistic labor propaganda and peace, harmony and contentment again will be the watchword.

There are problems which confront the negro race in the South which history sheds but little light upon because analogy cannot be applied to their solution for the obvious reason the present conditions are not entirely comparable with past periods of war and peace.

Nevertheless, some of the issues of the World War which it is hoped have been settled for all time suggest to my mind a few applications:

For instance, that organized labor autocracy must make way for industrial democracy; that industrial right must be substituted for industrial might; that paternalism as a constructive force has been an absolute failure to supplant individualism, which means progress and the onward march of civilization.

Notwithstanding all the horrors of that terrible war, it has developed a stronger feeling within the negro race for brotherhood and brought the race to a better understanding of what constitutes mutual obligations and helpfulness to each other. The war, while not initiating the new spirit of industrial brotherhood, has unquestionably spread this sacred doctrine throughout the race.

This fact is evidenced by the birth of the Southern Federation of Afro-American Industrial Brotherhood, for the moral, economic, social and industrial welfare and mutual benefit of the members of the race living and working in the industrial institutions of the South.

President Abraham Lincoln long years ago breathed the spirit of this industrial race brotherhood when he said, in substance: "Every man should have a chance to better his condition." Therefore we of today, through an organized brotherhood, manned and fostered by negro economy, developing an efficient, honest, reliable manhood, may rise to any position in the realms of industry of honor and trust.

If the rule of right is to maintain, then the autocratic methods of organized labor and some employers must in time give way to the righteous democratic policies of industrial democracy, so that industrial relations of employers and the negro workmen of the South may be in the future founded more nearly on a basis of economic justice and square deal, which will mean "no man down, but all men up."

The war has not brought the South any new industrial problems, but has developed new phases of the old problems and focused its attention as never before on the necessity of co-operation with its negro workmen for the prevention of industrial and economic waste by strikes, and for the promotion of greater negro industrial efficiency.

Therefore, the Southern Federation of Afro-American Industrial Brotherhood is a child of necessity, and came into being for the sole purpose of providing effective communication and means of contact between the management and the negro workmen, who shall not as dictators, but in the spirit of righteousness, discuss and recommend to the management and endeavor at all times to bring about a better understanding between the employee and employer, and always keeping this one principle before it, "That the workmen's rights stop where the management's begin," thereby recognizing the fact that at all times the workmen of any institution must so act as to not by his actions become a menace to the progress of industry through economic waste, strikes and industrial unrest; hence, by so living and acting on matters pertaining to industrial relations, will insure justice, maintain peace and harmony and promote the general welfare of its members and cement the relation between employer and employee.

Subjects coming within the purview of the Brotherhood are a living wage, employment and working conditions; housing, domestic economy and living conditions; safety and prevention of accidents; health and works sanitation; transportation of employees, work practice, methods and economy; education and publication; recreation and athletics; development of reliable, honest and efficient manhood, and the continuous employment of the masses, for an idle hand and brain is an incubator of crime.

The further object and purpose of the Brotherhood is: 1. To

make strikes, lockouts and blacklists an absolute impossibility, by whole-hearted co-operation with the management of industry, and thereby bring about better conditions and mutual understanding, which will mean peace, harmony and industrial contentment among the workmen.

2. To insure to the general public and the whole people of the State of Alabama at all times an honest, reliable, industrial, self-sustaining, law-abiding negro manhood that will guarantee an adequate supply of those products which are absolutely necessary to sustain life and keep the wheels of industry moving.

3. To stabilize production on all lines, so that as far as in our power prices may also be stabilized and thereby bring down the "high cost of living."

4. Through its efficiency, and co-operation of the management, it aims to insure the masses of the race steady employment at a living wage and under the best sanitary and working conditions.

The Brotherhood group insurance for sickness, accidents and old-age retirement is also provided for the purpose of "pooling the economic, industrial strength of the race for its development and general being and economic uplift of the masses working in the industries of the South." P. COLFAX RAMEAU, President.

Significance of the Surrender of Villa in Probable Resumption of Mining and Other Operations.

Chihuahua, Mexico, August 10—[Special.]—A terrorism that hung over every home from the humblest to the highest, a gloom that caused children to speak in hushed voices when they heard the clatter of horses' hoofs, that kept the people of Chihuahua and adjoining States in a nervous strain for years, have been removed. Villa has surrendered! "Pancho," the Robin Hood of modern times, the scourge of mountain and desert, has accepted peace with the supreme government.

Around the braziers and camp-fires for years to come will be told stories of the wonderful deeds of Villa. He is a figure not to be forgotten. Already in the eyes of many he is the one real hero of the revolutionary period of Mexico. Did he not defy the Colossus of the North? Did he not outwit and outmaneuver the great Americano, General Pershing? Such is the Mexican viewpoint.

It is the belief of men who were in a position to obtain an insight into Villa's character that the cause of his surrender was fear lest the Yaqui Indians placed upon his trail by Acting President De la Huerta would take his life. It is known that Villa has a terrible fear of Yaqui Indians. It was this wholesome fear of these relentless fighters that caused him never to overstep the boundary and enter their dominion in the State of Sonora. Not once did Villa molest the Yaquis. When he learned that several thousand Yaqui Indians were on their way to take up his trail with instructions to capture him dead or alive he began negotiating terms of surrender. Never before had the Yaqui Indians been used against him, which leads to the conclusion in the minds of some that perhaps the late Venustiano Carranza did not want to get rid of Villa. He was a good excuse to perpetuate the power of the Carranza administration, it may have been thought.

One of the immediate effects of the elimination of Villa will be the restoration of railroad traffic throughout Chihuahua, Durango and Coahuila. General resumption of industries, foreign-owned mines, ore-reduction mills and other enterprises will be brought about as quickly as men and facilities for doing so may be had. Villa and his bands ranged over a scope of territory extending from the United States border southward for 350 miles and an almost equal distance east and west. They rode over this expanse of territory almost at will. Many mining companies that have continued in operation during all these years were able to do so only because of the fact that they paid Villa a tribute of \$5000 to \$50,000 a year as a protection against molestation. It was from this source, in addition to the sums of money and bullion that he secured in his raids upon mining camps and towns, that Villa is said to have obtained in the aggregate an enormous store of wealth.

Two of the largest smelters upon the continent are situated in the region that was controlled by Villa, both of them owned by the American Smelting & Refining Co. One plant is at Chihuahua and the other at Asarco, Durango.

While the Laguna district and its metropolis, Torreon, are on

the outskirts of Villa's territory they were raided by him from time to time. With the removal of this menace there should be an immediate revival of industry in the Torreon district. In that city are situated a large smelter, several big guayule rubber factories and other manufacturing plants. The Laguna region comprises the valley of the Nazas River, and is noted for its cotton. Some large plantations around Torreon are owned by Americans. One American company, the Tlahuaila Agricultural Corporation, owns 80,000 acres of cotton land not far from San Pedro.

At Manimi and Descubribora, a short distance northwest of Torreon, are mines that will now be brought to full capacity. It was in the Parral mining district that Villa was most often seen, due to the fact, perhaps, that it was not a great distance from his mountain rendezvous.

At the towns of Pearson and Madera big lumber mills were built about 12 years ago by a syndicate of British interests operating under the name of the Madera Company, Ltd. While these mills were not destroyed, it was impossible to keep them in operation except for short intervals. The same interests own a tract of 3,000,000 acres of timber land in Western Chihuahua. With tranquillity assured this lumber industry will assume big proportions.

The surrender of Villa is the most important factor in the establishment of country-wide peace in Mexico that has occurred since the overthrow of Porfirio Diaz, 10 years ago.

Industrial Progress of Richmond, Va.

Richmond, Va., August 3—[Special.]—Under the laws of Virginia the Mayor of Richmond and those of other Virginia cities are required to make annual reports of the industrial progress of their cities. Mayor George Ainslie of this city has just completed his eighth annual report, showing the progress made in 1919 as compared with the business of the previous year. It will be observed that the only decreases recorded are in the matters of the city's receipts from bond sales, receipts from some other sources and in disbursements, the latter more than overcoming the two former. In all industrial lines increases are shown. The Mayor's statement is as follows:

	1918.	1919.	Increase.
Number of manufacturing plants	2,226	2,285	59
Capital of manufacturing plants	\$37,342,940.00	\$39,828,069.00	\$2,485,129.00
Value of manufactured products	135,299,212.00	155,745,600.00	20,506,388.00
Capital in jobbing trade	17,149,940.00	18,272,429.00	1,122,489.00
Annual sales in jobbing trade	120,934,665.00	150,359,722.00	29,425,057.00
Bank clearings	2,404,367,314.00	3,090,679,615.00	686,312,301.00
Bank deposits	112,310,748.91	132,790,480.56	20,479,731.65
Bank loans	105,350,954.82	116,510,772.14	11,259,817.32
Bank capital and surplus	20,734,281.24	22,044,424.88	1,310,143.64
Building operations	1,838,614.00	8,770,452.00	6,931,838.00
Postoffice receipts	1,290,707.29	1,274,606.54	*16,100.75
Population (Government estimate)	162,976	164,939	2,013
Assessed value—real estate	132,324,203.00	137,166,572.00	4,842,369.00
Assessed value—personal estate	78,414,496.00	90,148,571.00	11,734,075.00
Total taxables	210,738,699.00	227,315,143.00	16,576,444.00
Funded debt of city	17,488,065.00	17,781,555.00	293,500.00
Sinking fund	4,974,958.47	5,474,857.06	499,898.59
Receipts, except from bonds	7,706,788.42	6,192,620.21	*1,514,168.21
Receipts from bonds sold	500,000.00	492,885.00	*7,115.00
Cash on hand at end of fiscal year	275,071.52	361,791.78	86,720.26
Disbursements	7,760,777.85	6,202,410.77	*1,558,367.08

*Decrease.

Kentucky Steel Products Co. Organized.

Wire nails in all sizes, besides various other wire articles, will be the product of the Kentucky Steel Products Co., organized with \$250,000 capital at Lexington, Ky. John R. Humphrey, president; B. F. Buckley, vice-president; James T. Stone, secretary; John L. Buckley, treasurer. This company has orders for 5000 kegs of wire nails for shipment to China, and it has contracted for several hundred tons of steel to be delivered this autumn for raw material. It will construct two buildings, for office and cleaner-house, besides using a 100x50-foot factory building it has purchased. All the plant machinery has been ordered from Chicago and Akron, the equipment to include one machine 90 feet long, weighing 50 tons and driven by a 250-horse-power engine. E. E. Ayres, Ashland, Ky., with more than 20 years' experience in manufacturing wire articles, will superintend construction and have charge of the completed plant.

Protection Against Turkish Tobacco Being Demanded by Virginia and Carolina Growers

[Special Correspondence Manufacturers Record.]

Richmond, Va., August 10.

The opening of the leaf tobacco markets in South Carolina, always the first to begin the selling season, attracts the nervous attention of the Virginia tobacco dealers and tobacco manufacturers about this time every year, for they give an idea how the weed-selling business will start off in Virginia a month to six weeks later. And now since the boll-weevil has driven many Georgia cotton growers to embark in tobacco culture, small markets have sprung up in the northern part of that State, and these, too, are attracting attention of Virginia dealers. In fact, a great portion of the bright tobacco offered on these far South markets by the farmers is bought by Virginia dealers and manufacturers and large cigarette and smoking tobacco manufacturers having plants in Richmond and other Virginia cities, a majority of the houses have buyers now in South Carolina and Georgia, the selling season there, which lasts about six weeks, being in full blast.

The reports from these buyers is that the bright leaf tobacco started off with even higher prices this season than last. The average per hundred pounds for the first week was \$18, against \$14 in 1919; the second week \$24, against \$21 last year, and last week it was \$27, against \$22.50 a year ago. Of course, the grades of tobacco offered improve week by week for several weeks, as it is the custom of the growers to start the marketing ball in motion with their poorer grades of the leaf. Hence to arrive at a correct conclusion as to values the prices and the averages are compared with those of the corresponding week the year before.

The news from the South Carolina-Georgia markets is very pleasing to the Virginia and North Carolina tobacco growers, who will commence marketing their crops later on, in the Eastern North Carolina markets September 1, and in the "Old Belt" of Virginia and North Carolina September 15.

In both States, especially in Virginia, the prospects now are for a better quality and larger crop than last year. Because of the scarcity of farm labor, but few, if any, old tobacco growers in-

creased their acreage this year, but the high prices prevailing last year caused them to put out every plant they could reasonably hope to successfully cultivate and cure. However, many farmers in the eastern part of the State who never grew tobacco before planted fewer acres in peanuts and in cotton and ventured into bright tobacco. In Nansemond, Isle of Wight, Sussex, Surry and perhaps two or three other counties many acres heretofore devoted to peanuts and cotton were planted with tobacco, and in some of these counties experts were employed to teach the farmers the art of tobacco culture, and more especially the art of leaf-curing.

In the counties named the farmers have been very successful, so much so that warehouses have been built in the city of Suffolk, in Nansemond county, and a new Virginia market will be opened up there September 15.

In other counties, such as Greenville, Brunswick, Dinwiddie and Prince George, in which some tobacco has always been grown, farmers who heretofore preferred to grow peanuts and other things have this year tried their hands at tobacco culture. Thus the Virginia tobacco crop will be increased several million pounds. The increased acreage has been put in the bright leaf that is used so largely in the manufacture of cigarettes, and it is believed that the increased and still rapidly increasing consumption of cigarettes will keep the prices for this class of tobacco away up, making tobacco culture very profitable to the Virginia and Carolina farmers, as it has been for the past several years.

Incidentally, it may be observed, tobacco culture for cigarette-making is changing the views of a great many Virginia people on the tariff. Already there is being heard in the land a clamor for a high protective tariff against Turkish leaf tobacco, vast quantities of which are imported to enter into the manufacture of cigarettes in competition with the bright leaf that is now so profitable to the farmers of the Virginia-Carolina "Old Belt" and the new tobacco-growing regions of Eastern Virginia, Eastern North Carolina and South Carolina and Georgia.

Useless Structural Material Can Be Eliminated by Revising Building Codes.

Among the factors which are operating to increase building costs in certain cities, nothing is more unnecessary than archaic building code requirements. An instance where \$100,000 worth of extra material is required in a single building through unnecessarily stringent rulings is known. A steel beam may be cut in two at the mill and one-half sent to one city will be allowed to carry 50,000 pounds, while in another city, where safe but economical building code requirements exist, will permit the beam to carry 60,000 pounds. The framers of the latter ordinance were conservative and based their stresses on competent authorities, but the owners in the first city are taxed heavily for the ultra conservatism of their building code committee.

To expose this situation and aid in leveling the building codes to a safe and sane position, the technical committee of the Staff Council of the National Federation of Construction Industries is inaugurating an important study of the situation throughout the country. The executive committee, consisting of Wharton Clay, chairman, Commissioner, Associated Metal Lath Manufacturers; B. H. Jillson, Illinois Society of Architects; C. E. Paul, construction engineer, National Lumber Manufacturers' Association; Virgil G. Marani, chief engineer, Gypsum Industries Association; A. C. Irwin, engineer, Portland Cement Association; W. Carver, architect, Common Brick Association, and L. P. Keith, secretary, are preparing this study, and will shortly issue a tabulation showing the stresses allowed by the Bureau of Standards and other authorities. Against this will be shown the building ordinance requirements of the various cities.

Paper an Essential Element in Telephone Equipment.

One of the big elements in the makeup of the underground cable, the magneto and several of the other important adjuncts to lines of telephone communication is paper, says the Western Electric News Service. Manila pulp paper has always been the big favorite. Recently wood pulp has been used because of the shortage of manila pulp, but it still lacks several of the finer qualities of the imported grades. Prior to the war large quantities of all-linen paper made in Europe were used in certain processes in making condensers. None of the American manufacturers cared to handle it, as it required so much attention and had such a limited distribution. However, three companies have now taken over the task in this country, and although cotton is used to a large extent, their output is every bit as good, declares the Western Electric News Service, as that of their foreign competitors.

A Valuable and Interesting Booklet.

The Huntsville and Madison County Chamber of Commerce, Huntsville, Ala., has issued its 1920 booklet of facts briefly presented concerning Huntsville and the country surrounding it. It is stated that all the information given is based on data from sources of authority. Among the contents are logs of State highways extending out of Huntsville in every direction, which will be found valuable by automobilists. The publication is handsomely and beautifully illustrated. W. L. Lyle is president; Earle Ford, treasurer, and P. O. Aiken, secretary, of the Chamber of Commerce.

Trade Developments in Great Britain

BRITISH DYE INDUSTRY, SHIPBUILDING AND TRADE WITH GERMANY.

[Special Correspondence Manufacturers Record.]

London, England, July 29.

The president of the British Board of Trade states that legislation prohibiting the importation of synthetic dyestuffs, except under license, will be enforced as quickly as possible.

Speaking at a recent meeting of the "Color Users' Association" in Manchester, the chairman stated that it is the definite opinion of the British Government that synthetic color-making factories run by experts with a competent staff of chemists and equal to those of any other nation are essential to national security. He also stated that the Government had agreed to give financial assistance to allow certain schemes of research work to be completed.

Some interesting details as to Germany's stock of dyestuffs were given at the meeting, says the American Chamber of Commerce. In December last the stocks in Germany amounted to 22,000 tons and comprised about 13,000 items, of which the British Government was entitled to receive 3300 tons under the reparation clauses of the peace treaty, but up to the present only half of the amount has been received.

It is worthy of note that, during the discussion in Congress on the Longworth bill, which seeks to regulate the importation of coal-tar products, to promote the manufacture thereof in the United States, much the same opinions were expressed as in Great Britain. The dye industry was characterized as being absolutely essential to the life of the nation in time of war, and no nation could now afford to be dependent for its supplies on a foreign monopoly, as was formerly the case. The dependency of America was shown by the statement that, prior to the war, Germany supplied no less than 85 per cent of the consumption, 15 per cent only being produced in America.

The report that Congress is planning to put the American dye industry on a firm basis by means of a 10-year embargo has aroused much interest in Great Britain. American imports of German dyes are already restricted to colors which are not available in sufficient quantities, such as the Du Pont de Nemours & Co., the National Aniline & Chemical Co. and others have already a large number of chemists employed, and the proposed amalgamation of the General Chemical and the National Aniline companies, with a capital of £70,000,000, shows that in America, as in Great Britain, there is a marked determination to make the dye industry independent of foreign dyes.

British Trade With Germany—Germany Regaining Pre-War Toy Trade.

According to the American Chamber of Commerce in London, information supplied by the British Government shows that German imports into Great Britain from the date of the armistice to May 31, 1920, were valued at over £10,000,000, whilst during the same period exports to Germany from Great Britain totaled over £43,500,000 in value.

The fact that Germany is successfully recovering some of her pre-war trade is causing considerable alarm in certain industries in Great Britain, and particularly in the toy industry, where manufacturers are already feeling the competition very keenly.

British Board of Trade statistics just published regarding the importation of toys show that toys of the value of £400,000, practically pre-war level, have been imported from Germany this year, and from Japan to the value of £146,000. Owing to the state of the exchange, German toys can be sold at a lower price than British.

The British Government some time ago stated that if an industry was in danger of becoming overwhelmed by the excessive importation of goods at prices below the cost of production in Great Britain owing to the state of the exchanges, they would consider the advisability of checking such imports. The Association of British Toy Manufacturers have now approached the Government with a view to having this promise carried out. No action has yet been taken, but the Government say that they are carefully watching the situation.

Record British Shipbuilding—Construction Increases by 60 Per Cent in Fifteen Months.

Lloyds' shipbuilding returns just issued show that the volume of shipping under construction in Great Britain has increased by nearly 60 per cent during the last 15 months, whilst that of the United States has been reduced by nearly 50 per cent.

The complete change of position between the two countries is strikingly illustrated by the following figures: At the end of June, 1919, the amount of tonnage under construction in the United States exceeded that of Great Britain by over 1,250,000 tons. This excess in the United States had, by the end of last year, been turned into an excess in Great Britain of 27,000 tons, whilst at the moment the amount of tonnage being built in Great Britain exceeds that of the United States by nearly 1,500,000 tons.

The explanation of this remarkable change is said to lie in the fact that British shipbuilding industries released from Government control are now working off five years' arrears, whereas the great revival in the United States, due to the war, is now declining.

Closer analysis, however, of the relative shipping position of the two nations discloses the fact that, whilst American tonnage has increased by over 10,000,000 tons in six years, that of Great Britain is still less than it was in 1914 by 781,000 tons, and that during the year ending June 30 last the American merchant fleet increased by over 2,500,000 tons, whereas the British increase was only slightly over 1,750,000 tons.

The total amount of tonnage under construction in Great Britain is just over 3,500,000 tons, and for the rest of the world, slightly over 4,000,000 tons.

Cinema to Promote British Trade and Anglo-American Friendship.

The American Chamber of Commerce in London reports that a British motion-picture exhibition is at present touring the world, illustrating to the people in these countries the progress of British industries and the ability of Great Britain to supply many of the world's needs.

At present the main features of the exhibition are the special industries of Sheffield and Glasgow, but it is stated that the towns of Northampton, Leicester, Nottingham, Leeds, Bradford and Newcastle are about to take up this method of advertising.

Another development of the film industry specially designed to promote greater harmony between the English-speaking peoples is being initiated by the Anglo-American Unity League. This will consist of special films conveying messages of good-will from prominent leaders and expressions of opinion from the foremost British and American newspapers.

These films will shortly be released for free exhibition throughout the cinemas of the United States and the British Empire, and the efforts to promote good-will and comradeship between the two nations by this means will be watched with interest.

\$1,000,000 Coca-Cola Building for Baltimore.

Coca-cola manufacturing facilities at Baltimore will be concentrated in a \$1,000,000 building which the Coca-Cola Company of Atlanta has decided to erect. This structure will be of reinforced concrete with brick curtain walls, 4 stories high, 600 feet long by 190 feet wide. It will have 155,000 square feet of ground floor space, to be equipped with machinery for daily capacity 50,000 gallons of coca-cola, which will be two and a half times the production in the company's present Baltimore building, used both for manufacturing and for general offices.

In connection with this big new factory, the company will build a plant for the manufacture of barrels and other cooperage, all to be located on a 4½-acre site recently purchased. Plans and specifications will be furnished by the Arthur Tufts Company of Atlanta, which will also build the new structures. Louis Wilcox, Baltimore representative of the Arthur Tufts Company, will be in immediate charge of construction. S. L. Willard, resident manager of the Coca-Cola Company, will manage the new plant upon its completion.

Water-Power Unused Is Wealth Wasted

BIG HYDRO-ELECTRIC OPERATIONS IN EUROPE TO SAVE COAL—LIST OF PROJECTED WATER-POWER DEVELOPMENTS IN AMERICA.

By A. V. DRAPER.

The question of fuel supply, both for the heating of houses and for industrial purposes, has now an outstanding importance in every European country. The cost of coal has advanced to almost prohibitive figures because of the loss and wastage of war, the present utterly inadequate means of transport either by land or water, and on account of increased costs in wages and in supplies, and very often greatly decreased production at the mines.

Coal-producing countries, like England, France and Belgium, are providing much less than enough for home use, while the situation of the coal-importing countries is correspondingly more serious. The world for many years will not be able to produce and transport enough coal for its needs, while there will be an increased demand for some sort of power to turn the wheels of industry. Even when transportation is available, the price of coal has become so high in many European countries that it is in a very real sense a luxury. In Italy coal, it is said, costs fifteen times as much as it did before the war.

Already far ahead of our own country in the development of their water-powers, a number of the countries of Europe are concentrating their attention on making more fully available this comparatively cheap source of energy. Others are turning to electrification of their railway systems, making use of hydro-electric power wherever possible.

Although not possessing any water-power resources, Holland is now at work on an electrification project which contemplates a country-wide extension of high-tension transmission lines. Great economies will be effected by concentrating in one system the various electricity supply stations of the country. The execution of the plan will take from five to ten years, but when completed Dutch industries will by means of this extensive system of electrification be placed in a position to enjoy cheaper power and thus compete for trade on a very favorable basis with other countries. The scheme is estimated to cost 125,000,000 florins, or \$50,000,000.

Belgium has inaugurated a program for the ultimate electrification of its entire railway system. First the double-track road between Brussels and Antwerp will be electrified, the passenger service to take precedence; then the freight engines will be changed. Steam locomotives, however, will continue to be used until they are worn out. After the Brussels-Antwerp track other lines will be taken, and at an early date electricity will be introduced on the network of freight connections in and around Brussels. Electrification of the branch lines serving the rural districts will be undertaken gradually, and it is not expected that steam locomotives will be entirely eliminated for a good many years.

In Italy, where, as stated, coal has increased fifteen fold, a commission appointed for the purpose of electrifying 4000 miles of State railways is now functioning. The first lines on which the change in motive power will be made are those of Piedmont and Liguria, and the most important of these is the line from Genoa to Modane, passing through Turin. Electric traction will also be provided on the principal lines connecting central and northern Italy, between Florence and Bologna, Rome and Naples and certain sections in the south. It is the hope of the Italian authorities that electrification of the railways will prove one of the most effective means of overcoming the difficulties under which that country now labors, because of the dependence upon foreign sources of coal supply. The project will cost 800,000,000 lire, or \$154,000,000 at normal exchange, and will require at least 10 years for its execution.

Italy, moreover, possesses an abundance of latent energy in the form of "white coal," and hydro-electric concessions totaling approximately 3,000,000 horse-power have already been granted. To encourage the establishment of hydro-electric plants the Government has provided a system of subsidies based on the number of horse-power made available and running for a period of 15 years.

The acquisition of Trentino and other former Austrian provinces have greatly strengthened Italy's potential resources in water-power, which it now possesses in sufficient abundance to supply the industrial districts of Piedmont and Lombardy, and in addition to furnish energy, when properly applied, to run the entire railway system of the country on an electrical basis.

Less than one-tenth of the total available water-power in Greek Macedonia is utilized, but the Greek Government is at present investigating the situation and expects to be able to make available a much larger percentage of the 66,000 horse-power which the country is estimated to possess. Power from water is now being used by such industries as flour and weaving mills, oil-extracting plants and the chemical industries.

In Transcaucasia existing hydro-electric stations yield only 6725 horse-power, while surveys indicated that over 350,000 horse-power is possible.

The Parliament of Sweden has definitely approved of electrification of the State Railways between Stockholm and Goteborg, which means entirely across the lower end of the peninsula, and has appropriated for the work 23,000,000 crowns, normally \$6,164,000. Conversion from steam to electrical operation will not be completed before 1925. Sweden has a potential water-power total of 6,200,000 horse-power, of which 1,105,000 turbine horse-power, or 16 per cent, has been developed.

Switzerland produces coal only in negligible quantity. Its supply was largely derived from Germany in the past, and it now places more and more dependence upon England and America, especially the latter. The importation of coal in Switzerland has been centralized and an association formed for the purpose now has a purchasing department at the Swiss legation in Washington. The difficulty of obtaining coal and its high cost has led to a considerable development in Switzerland of hydro-electric power stations, and their construction is being pushed despite high material and labor costs. The Swiss power stations had approximately 523,000 horse-power yearly average available prior to the war. It is estimated that the water-power which is immediately available in Switzerland is 1,189,000 horse-power. The proposal to electrify the entire Swiss railway system would require 245,000 horse-power. The Government has found that much improvement can be made in the economical application of electricity which is now employed for heating as well as power and lighting. At Zurich a considerable saving of coal has been effected by the electrification of bakeries, power from hydro-electric plants being found more economical for baking than coal or wood at present prices. Electrically-produced heat is now being used on a large scale in cooking, and the demand for ovens adapted to this method is much in excess of the ability of the manufacturers to supply them. Even prior to the war electric bakeries were in common operation in Norway and Sweden as well as Switzerland.

The whole question of electrification is under consideration in the United Kingdom, the problem being studied in all its phases, with special attention directly to those portions of railway which are already electrified and the cost and time necessary to make the change on the steam lines. In South Africa engineers completed a report early in the present year on the cost of electrification of the railways there. The advantages of making the change in certain specified lines at least were declared to be apparent.

Present indications are that the rest of this year will be required for the removal of the debris from the coal pits of Lens, in Northern France. The majority of the mines are flooded, due to the destruction of the mine shafts. It is reported that these will be constructed and repaired by a German organization, the cement furnished by Germany. Electric pumps are being installed. Estimates state that it will require two or three years to pump out the water, and that it will not be possible to extract coal even on a small scale before 1923 or 1924. Pre-war production cannot be attained before 1926 or later.

The French coal requirements are 40 per cent greater than

present production and importation, so it is not surprising that a coal crisis exists there, and that new and more rigid restrictions are being adopted.

In the study and development of hydro-electric power and the apparatus for generating it, France is recognized as a pioneer. Its claim as the world's richest country in water-power available for industrial purposes is based on the proximity of its highly developed manufacturing districts to its splendid power sites. The water-power available, developed and undeveloped, is estimated at 9,300,000. The total as estimated on low water flow in the report of the American Industrial Commission to France in 1916 is 4,600,000 horse-power.

The total horse-power developed up to 1914 is estimated at 800,000, and other plants now completed or under construction will double that figure. Coal shortage and high costs have greatly stimulated hydro-electric development since the war. The Midi Railway System is now being electrified with power from the Pyrenees region. The cost is estimated at 100,000,000 francs, and the work is to be completed in five years. Other roads are considering electric propulsion, and a great many industries now running intermittently or closed down for lack of fuel are looking forward to the early availability of electric power as their salvation.

The River Rhone, emptying into the Mediterranean, is of very great importance. Its value to France is threefold—navigation, irrigation and power generation. In a program calling for full use of its hydro-electric power, its usefulness in other directions must be constantly kept in mind in order to avoid conflicting interests. The projects under consideration and the estimates made for their development by Government engineers state that the power taken from the Rhone should be equal to the entire force of all the hydro-electric plants in France before the war, and should amount to a little less than one-tenth of the total potential energy of all French waterways. The actual figures are 750,000 horse-power, equal to a saving of 5,000,000 tons of coal a year. Having been discussed for a great many years, the actual work of developing this power has now started. The cost of the work done, and to be done, will reach 2,500,000,000 francs. This sum is expected to be largely covered by the sale of hydraulic power converted to industrial use. The development of the Rhone as now outlined will be of the utmost value in enabling France to recover industrially from the destruction of the war.

The German government plans to do away with the use of coal as a power producer so far as possible by the use of peat and by electrifying the railroads in the vicinity of all large cities. They have a new Thiessen 10,000 horse-power vertical gas turbine, which it is hoped will be able to replace coal burning locomotives. For the electrification of the railways the plan provides for the installation of large central power-houses equipped with peat-burning furnaces. Machinery has already been installed for working large peat beds, and experiments are now being made by the German government for pressing the peat in a form for economical transportation. In Austria also a plan has been formulated for electrifying the State railways. At present rates of exchange the cost is estimated at \$16,550,000. Here, as in Germany, the necessity for reduction in the consumption of coal is the prime reason for the movement. Investigations show that the streams and rivers of Austria could furnish 2,000,000 horse-power, and it is proposed to make this available for producing electricity.

The estimates of the United States Geological Survey on the coal reserves in this country place the figure at something over 4,200,000,000,000 tons. We are mining about 500,000,000 tons a year; at such a rate of consumption, our supply would last considerably more than 8000 years. The difficulty is not at present with the supply; the trouble is to get the coal out of the mines, and the yet greater difficulty is to find means of delivering it to the consumer. Transportation is the weakest link in our coal supply. Coal is over a third of the country's freight. The mining of coal is dependent upon an unbroken movement of cars past the mine's mouth. But the coal will ultimately be available for use, even though under present conditions it is not being economically mined and distributed.

With water-power the contrary is the case. Every day that goes by sees the loss forever of a very large amount of potential force. We are using only about one-tenth of our 60,000,000 horse-power available from the flowing streams of the country. Water

which once has passed the mill is gone. It is a matter of vital importance that the conservation lessons taught by the war be applied in this country as well as in Europe. If world competition demands the elimination of waste and the fuller utilization of every natural resource, the manner in which practically every country of Europe is attacking its coal-shortage problems and laying broad plans for the development of hydro-electric powers, including electrification of railroads and other huge projects, should be very suggestive to us. Their problems are not ours, but in principle they are the same.

The recently enacted Federal water-power bill provides the machinery for which this country has been waiting with growing impatience for 15 years or more. It is a long step in the right direction. The commission appointed for the purpose of adopting regulations to govern water-power licenses is now sitting in Washington. It is the understanding that hearings will be pushed as rapidly as possible in order that there may be no delay in taking advantage of the provisions of the bill. And then as soon as the necessary regulations are adopted to make the new legislation effective it will be up to the individual States and districts to make full use of it. Every State in the South has water-power available and in some of them the wealth is vast, as in West Virginia, Alabama, Virginia, North and South Carolina, Tennessee, Georgia, Arkansas and Texas. In Louisiana and Florida, of course, the amount is small. But in no State in the Union is there anything like the development of water-power which there could be and which there may be under the provisions of the recently enacted water-power act.

For the States of the South, Georgia may be taken as a typical example. In a recent discussion of the subject the Enquirer-Sun of Columbus stated that competent engineers estimate that Georgia has in its streams 2,152,850 undeveloped horse-power. This figure is based evidently on the maximum storage of waters possible by the construction of dams and reservoirs, and it is calculated to be the equivalent of 81,522,850 tons of coal. At the present price of coal this undeveloped horse-power is worth \$215,228,850 a year. The value of the undeveloped horse-power in Georgia is estimated to be worth twenty-eight times the total tax receipts of the State in 1918, and most of it going to waste. The showing in other Southern States would probably be equally significant.

As pointed out by the MANUFACTURERS RECORD in its telegram to President Wilson on June 11, urging that the water-power bill be signed:

"The unharnessed rivers which now run idly to the sea have a potentiality of millions of hydro electric power, the utilization of which would lessen the demand on our coal mines, reduce the cost of power to thousands of industries and eventually help to operate our railroads, and thus save much of the coal that now goes to waste on locomotives. The value of this water-power bill to the whole country, and to the South especially, cannot be estimated."

Extensive Water-Power Development Planned— Applications Filed Cover Thirty-nine New Developments in Fifteen States.

Washington, D. C., August 13.—[Special].—Herewith is a list of all applications for preliminary permit or license for power projects which have been filed under the Federal Water-Power Act. The list is given by States, and includes the name and address of applicant and a brief outline of the project.

ALABAMA.

Alabama Power Co., Thomas W. Martin, president, Birmingham, Ala.—Preliminary permit for hydro-electric plant on the Coosa River, in Alabama, below Government Lock No. 2.

ALASKA.

Speel River Power Co., E. P. Kennedy, president, 418 Foxcroft Bldg., San Francisco, Cal.—Preliminary permit for power project to be located in Tongass National Forest, in territory of Alaska, in vicinity of Speel River.

ARIZONA.

C. A. Heberlein, Prescott, Ariz.—Preliminary permit for project in Cataract Canyon, Coconino county, Arizona.

ARKANSAS.

Dixie Power Co., W. V. Powell, president, 33 Metropolitan Building, Chicago, Ill.—Preliminary permit to construct a dam across the White River, near Cotter, Baxter county, Arkansas.

CALIFORNIA.

Pitt River Power Co., San Francisco, Cal.; Messrs. Harr & Bates, attorneys, Westory Building, Washington, D. C.—Preliminary permit for power plant on Pitt River, California.

R. W. Hawley, Commercial Building, 833 Market St., San Francisco, Cal.—Preliminary permit to develop project on Silver Creek and its branches in Eldorado county, California.

Beckman & Linden Corporation.—Preliminary permit for project on Colorado River in Arizona and California.

IDAHO.

G. W. Spoerry, Bonners Ferry, Idaho.—Preliminary permit for project on Moyle Falls, on Moyle River, Idaho.

Utah Power & Light Co., Joseph Williamson, clerk, Augusta, Me.; M. O. Leighton, consulting engineer, McLachlen Building, Washington, D. C.—Preliminary permit for Soda Point, Lava, Narrow and Mink Power sites on Bear River, Idaho.

Idaho Power Co., F. F. Johnson, president, Boise, Idaho; M. O. Leighton, consulting engineer.—Preliminary permit for Upper Salmon Falls project on Snake River, Idaho.

Idaho Power Co., F. F. Johnson, president, Boise, Idaho; M. O. Leighton, consulting engineer.—Preliminary permit for Twin Falls project on Snake River, Idaho.

MINNESOTA.

J. D. Markham, A. Kelsey and J. F. Druar, 512 Globe Building, St. Paul, Minn.—Preliminary permit for Kelsey-Markham-Druar dam site on St. Croix River, between Minnesota and Wisconsin.

St. Cloud Water Power Co., A. C. Whitney, president, St. Cloud, Minn.—Application for preliminary permit to construct dam across Mississippi River at any point between Sec. 7, T. 123, R. 27 in county of Stearns and State of Minnesota, and Sec. 25, T. 35, Range 31, and Sections 30 and 31, in T. 35, Range 30 W., in Sherburne county, Minnesota.

MISSOURI.

W. R. Banks, Lock Box 1005, Lamar, Mo.—Preliminary permit for project on Osage River, between towns of Warsaw, Benton county, Missouri, and Tuscumbia, Miller county, Missouri, and Niangua River, between towns of Hahatonka, Camden county, Missouri, and mouth of the Little Niangua River, in Camden county, Missouri.

Western Tie & Timber Co., Warren C. Nixon, vice-president, 905 Syndicate Trust Building, St. Louis, Mo.—Preliminary permit for power project on Current River, Missouri, in Ripley, Carter and Shannon counties.

MONTANA.

Rocky Mountain Power Co., Charles MacGregor, president, Butte, Mont.—Preliminary permit for hydro-electric project on Flathead River from the outlet of Flathead Lake to the intersection of Flathead River with the south line of Sec. 32, T. 19 N., R. 21 W., Montana Mer., Montana.

NEW JERSEY.

The Canada Syndicate, Ltd., of Montreal, Canada, and Duncan, Young & Co., 111 Broadway, New York City, N. Y.—Preliminary permit to develop water-power in Delaware River above the town of Belvidere, N. J.

OKLAHOMA.

C. P. Chenault, Tulsa, Okla.—Preliminary permit for power project on the Arkansas River at a point commonly known as Ox Bow Bend, northwest of Tulsa, Okla.

OREGON.

Crown Willamette Paper Co., Pittock Block, Portland, Ore.—License for development at Falls of Willamette River, West Linn, Ore.

NEW YORK.

City of Buffalo, A. W. Kreinheder, Acting Mayor, Buffalo, N. Y.—Preliminary permit for project on Niagara River.

Henry Ford & Son, Inc., Dearborn, Mich.—License for project at Green Island, Government Dam at Troy, N. Y., Hudson River.

Louisville Power Corporation, Walter F. Wilson, president, Massena, N. Y.; Hugh L. Cooper, attorney.—Project on St. Lawrence River, from the west end of Croil Island (sometimes called Baxter's Island, or Upper Long Sault Island), westerly up the St. Lawrence River to the easterly end of Goose Neck Island, in the town of Louisville, county of St. Lawrence and State of New York.

Hydraulic Race Co., C. E. Dickinson, president, Lockport, N. Y.—Preliminary permit for power project on Niagara River, New York.

Paul T. Brady, 145 Broadway, New York City, N. Y.—Preliminary permit for dam across Delaware River at a point between the village of Barryville, on the New York side, and the village of Shohola, on the Pennsylvania side of the river.

Lower Niagara River Power & Water Supply Co., J. J. Albright, president, Lewiston, N. Y.; Hugh L. Cooper, attorney.—Preliminary permit for project located at a point about 500 feet south of the Michigan Central Railroad bridge, which point is about midway between Cleveland avenue and Niagara avenue, in the city of Niagara Falls, N. Y. Water to be returned to Niagara River at a point on the town of Lewiston, Niagara county, New York, on Lot 29 of the Mile Reserve.

Niagara County Irrigation & Water Supply Co., Edward Randall, president, Lewiston, N. Y.—Preliminary permit for project on Niagara River, New York.

Niagara Falls Power Co., Paul A. Schoelkopf, president, Niagara Falls, N. Y.—Preliminary permit to divert water from Niagara River above the falls under the provisions of the treaty between the United States and Great Britain proclaimed May 13, 1910.

Niagara, Lockport & Ontario Power Co., Fred D. Corey, president; Hugh L. Cooper, attorney, Marine Trust Co. Building, Buffalo, N. Y.—Preliminary permit for diversion and use of water for hydro-electric power purposes from above the falls at Niagara.

St. Lawrence Transmission Co., F. A. Stoughton, president, Potsdam, N. Y.—Preliminary permit for project on St. Lawrence River in vicinity of Long Sault Rapids, St. Lawrence county, New York.

Messrs. Thomson & Porter, Dewitt Clinton, attorney, Buffalo Savings Bank Building, Buffalo, N. Y.—Preliminary permit for project on Niagara River, N. Y.

Niagara Gorge Power Co., Bert L. Jones, vice-president, 604 Ellicott Square, Buffalo, N. Y.—Preliminary permit for diversion of water from Niagara Falls, Niagara River, New York.

VIRGINIA.

Roanoke River Development Co., H. G. Buchanan, president, 318 Mutual Building, Richmond, Va.—Preliminary permit for project on Roanoke River, in Mecklenburg county, Virginia, between Bugg's Island and the town of Clarksville, in said county.

WASHINGTON.

Washington Irrigation & Development Co., H. J. Pierce, president, 905 White Building, Seattle, Wash.—Preliminary permit for project on Priest Rapids, Columbia River, Washington.

Alex. Polson, M. E. Reed and W. H. Abel, Montesano, Wash.—Preliminary permit for project at headwaters of Wynooche River, in Olympic National Forest, Washington, and northeastern part of Gray's Harbor.

Messrs. Thomson & Porter; Dewitt Clinton, attorney, Buffalo Savings Bank Building, Buffalo, N. Y.—Preliminary permit for hydro-electric plant in Niagara Gorge.

Northwestern Power & Manufacturing Co.; Donworth, Todd & Higgins, attorneys, Hoge Building, Seattle, Wash.—Preliminary permit for project on Lake Crescent, in Chelan county, Elwha River, in Washington.

Hugh L. Cooper, 101 Park avenue, New York City, N. Y.—Preliminary permit for project on Clark Fork of the Columbia River, Washington.

Sound Power Co., H. O. Pond, president, 25 Broad street, New York City, N. Y.—Preliminary permit for project on Sultan River and Olney Creek, in Snohomish county, Washington.

Straits Power Co., H. O. Pond, president, 25 Broad street, New York City, N. Y.—Preliminary permit to use waters of Solduc River, Crescent Lake and Lyre River, in Chelan county, Washington.

Albemarle, N. C., Becoming Textile Center—Improvements to Aluminum Plant at Badin.

Raleigh, N. C., Aug. 3.—[Special.]—Albemarle, Stanly county, is becoming an important cotton-milling town. It is now completing its thirteenth mill, at a cost of \$500,000. This will be known as Efrid No. 5, and has 12,000 spindles. It will go in commission in about 60 days. It is of the most modern type, both in construction and equipment. The Wiscasset Mill Co. has eight mills there. There is also the Lillian knitting mill. All five of the Efrid mills at Albemarle spin. The mills are in two groups, and each, Wiscasset and Efrid, has a model public school maintained largely by the mills. There are over 3000 employees in the 13 mills and the knitter.

At the big aluminum plant at Badin, a few miles from Albemarle, another potroom has been put in service, making the eighth. Each of these potrooms requires 10,000 horse-power of electricity. There are two dams on the Yadkin River at Badin, which give the power—the main one 214 feet high and a lower one, three miles below, 50 feet high and giving 20,000 horse-power. The lower dam utilizes the water which passes over the upper dam, which gives 125,000 horse-power.

The textile school of the State College of Agriculture and Engineering at Raleigh will have a new department, that of textile engineering. This will open early in September with specially selected teachers.

Extension Requirements of Houston's Municipal Railway.

Houston, Tex., August 14.—[Special.]—With the development of the Houston Ship Channel and the establishment of industrial plants along its course the need for the construction of extensions of the municipal railway of the Houston Belt & Terminal Co. down both sides of the waterway is becoming more apparent, according to J. C. McVea, city engineer. This railroad, which is owned by the city, now embraces 15 miles of track. It already runs along the south side of the Ship Channel for a distance of nine miles. The proposition of extending the system has the support of the manufacturing and business interests of Houston. The cost of the main line extensions on both sides of the channel reaching to Morgans Point and Goose Creek would be approximately \$1,000,000. Mr. McVea estimates, and he thinks that not only would such an expenditure be entirely justified through development of the port and increased values in the community, but would result in actual profit in earnings.

A Solution for the Present Fuel Problem

By F. F. UEHLING, A. S. M. E., New York.

"Nowadays the coal dealer speaks of his precious product mostly in the future tense. We are seriously threatened with another siege of heatless days, lightless nights, powerless power, cookless cooks and all the other long train of discomforts that we experienced during the war, all because coal is not reaching the consumer in the required quantity. In some quarters it is even predicted that our coal bins may become "has beens."

What are we going to do about it? Two courses lie before us: we must either produce more coal or consume less. Shortage of freight cars is the principal factor preventing immediate rapid increase in production. In view, however, of the fact that the actual falling off in production is much smaller than the serious inconvenience caused thereby would indicate, there is open to us another course which would bring about quick relief, namely, reduction of consumption by elimination of unnecessary waste. When I speak of reducing coal consumption I mean burning it more efficiently by adopting correct combustion methods. If this were done more generally, we would, merely by the reduction of waste, have enough coal for all our requirements even with the present reduced rate of production. It is not at all necessary to reduce the amount of heat from a heating system or to curtail the

sumably one-third of the above amount, or \$25,000,000, will be applied to the purchasing of coal cars. At \$3000 per car, this sum would purchase 8333 cars, and this does not make any provision for additional locomotives to haul these cars, which cost in the neighborhood of \$75,000 each.

It is estimated that there are between 900,000 and 1,000,000 cars suitable for transporting coal in service at the present time; therefore, it is apparent that the Government's help will not go very far toward solving the coal transportation difficulties; in fact, it will mean increasing car capacity by less than 1 per cent, whereas it is estimated that 10 per cent or more increase is required immediately; the latter estimate is based on the fact that

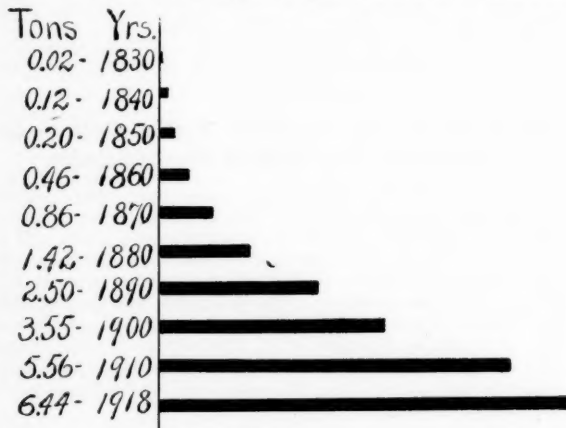


FIGURE 1. PER CAPITA ANNUAL CONSUMPTION OF COAL IN UNITED STATES DURING PAST CENTURY.

output of power from a steam-power plant in order to conserve fuel materially, perhaps 20 to 30 per cent. The extent of the savings that may be effected and how to realize them will be referred to later. Let us first consider the obstacles preventing an immediate large increase in production of fuel.

Why Coal Production Lags.

We have plenty of coal in the ground for a long time to come, and all authorities agree that we have plenty of miners to mine it. The neck of the bottle is the transportation facilities. Coal cannot be transported to market fast enough to meet the demand, because of the serious car shortage. Consequently involuntary idleness prevails at the mines to a deplorable extent. While the coal strike of last fall did result in a depletion of stocks on hand, labor trouble is not at present the cause of underproduction.

One obvious remedy, then, for the present chaotic coal situation is to provide more freight cars, but unfortunately a vast fleet of suitable cars cannot be made to spring up over night like the gigantic army that a certain noted statesman used to talk about so glibly while the rest of the country was talking preparedness. The announcement was made recently that the machinery of the Government would be set in motion to acquire more freight cars, but judging from past experience, we are justified in assuming that red tape will hold them back many, many months. Very likely they will start service just in time to be frozen in for the winter.

The Government's plan contemplates the expenditure of \$75,000,000 shortly for new freight cars. Coal constitutes about one-third of the total tonnage transported by the railroads; hence pre-

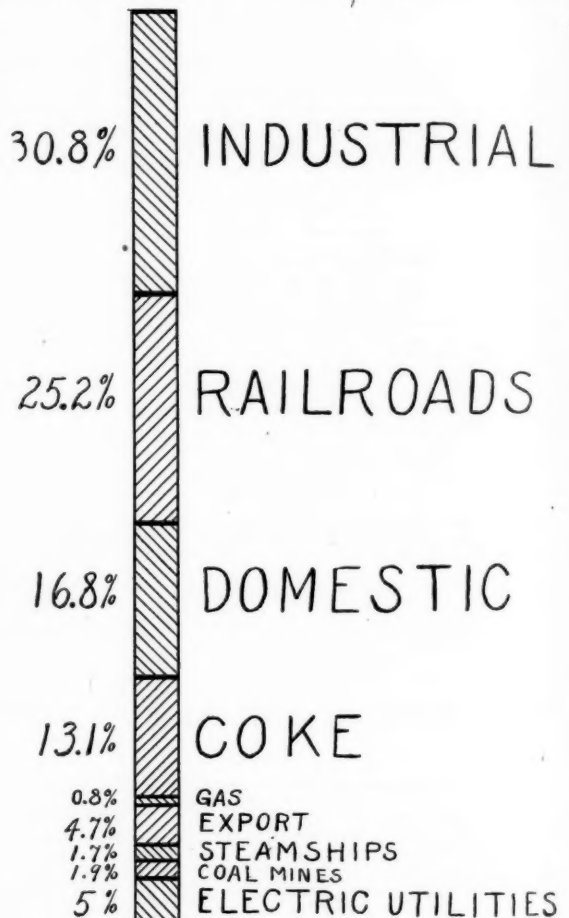


FIGURE 2. WHAT BECOMES OF COAL, BASED ON TABLE II.

production for the present year is almost 10 per cent below normal, and there is still the deficit of nearly 20 per cent from last year to be made up. The falling off of last year's production is shown in Table 1:

TABLE I.—ANNUAL UNITED STATES PRODUCTION OF ANTHRACITE AND BITUMINOUS COAL.

	Pennsylvania Anthracite, tons.	Bituminous, tons.
1913.....	91,525,000	478,435,000
1914.....	90,821,000	422,704,000
1915.....	88,995,000	442,624,000
1916.....	87,578,000	502,520,000
1917.....	99,612,000	551,790,000
1918.....	98,826,000	579,386,000
1919.....	86,200,000	458,063,000

We are using more and more fuel all the time, as shown by the

per capita consumption chart, Fig. 1. This is not a very comforting thought, as we view our present fuel dilemma.

More Cars Not an Immediate Solution.

In view of the facts presented above, it appears as though there is little likelihood of increasing transportation facilities sufficiently in time to be of much use to the country this year. On the other hand, the alternative solution of the coal shortage problem, namely, the reduction of waste in using fuel, can be put into effect just as quickly as fuel consumers can learn how to conserve, which is almost immediately.

Possibilities of Economy in the Use of Coal.

What is economy? In the matter of food, one man's definition might be to eat half as much as he feels like eating. Another's idea of economy is to avoid throwing away left-overs, or, in other words, preparing only as much food as can well be eaten. The first case represents stinting and the latter true economy. It is the latter kind of economy that can be and should be practiced to a greater extent in burning fuel. We do not have to pay the price of heatless days and lightless nights in order to conserve fuel. We can keep our gay white ways as bright as ever and have plenty of heat this winter and still save 20 to 30 per cent or more of the present extravagant outlay for fuel.

Where are these savings to be made, in domestic consumption or in industry? The answer to this question is that large savings can be made by both, but that it is primarily the task for general industry, for the very simple reason that consumption other than for domestic purposes is by far the greater part of all fuel produced. This fact is shown quite conclusively by Table II, which is compiled from Government statistics covering the year 1917. Fig. 2 shows the relative importance of each group listed in Table II. It will be noted that domestic consumption is only about 17 per cent of the total, whereas 25.2 per cent is utilized by the railroads and 30.8 per cent in industrial plants:

TABLE II.—CONSUMPTION OF COAL IN UNITED STATES
IN NET TONS DURING 1917.

BITUMINOUS COAL CONSUMPTION.

Railroads	153,700,000
Industrial plants	176,366,000
Electrical utilities	31,693,000
Used at mines	12,117,000
For making beehive coke	52,247,000
For making by-product coke	31,506,000
For making coal gas	4,960,000
Ocean steamers	10,884,000
Exports	23,840,000
Domestic purposes	57,104,000
Total bituminous	554,417,000

ANTHRACITE COAL CONSUMPTION.

Railroads (Approx.)	6,500,000
Industrial (Approx.)	20,000,000
Domestic (Approx.)	50,000,000
Exports (Approx.)	6,000,000
Total Anthracite	82,500,000
Total consumption bituminous and anthracite	636,917,000

Much Fuel Can Be Saved in Industrial Plants.

The industrial plants are by far the largest consumers. They and the electrical utilities, as well as the mine plants, consume about 240,000,000 tons annually, or nearly 40 per cent of the total. Here is the greatest field for fuel conservation, and it is in many respects the easiest one in which to produce improvements, for the reason that each fireman burns a relatively large amount of fuel, and it is easier to train a small number of men to burn a large quantity of coal than to train a much larger aggregation of men (domestic consumers, for example) to burn a much smaller quantity of coal.

Coal is burnt still less efficiently in locomotives, but unfortunately it is much harder to improve the economy of the locomotive plant for the reason that the very conditions of operation make it extremely difficult to train and supervise the firemen so as to increase their efficiency.

Great savings could be made by producing more coke in by-

product ovens instead of by the wasteful beehive oven process. More than half of the coke is still produced by this wasteful method, which in itself means an unnecessary loss of millions of tons per annum.

Let us confine our attention to the stationary power plant field, which consumes about 40 per cent of the total production. Not alone is that the largest field of consumption, but it is the one with which the writer is most familiar, and hence best able to discuss. It must, however, not be overlooked that corresponding savings are possible in the other fields as well.

Stationary Power Plants Spend Nearly \$1,500,000,000 Annually for Coal.

It is not possible to obtain power from fuel with anything like 100 per cent efficiency, but we can raise the present figures materially by educating power plant operators into more economical ways and by furnishing them with the means for keeping tabs on waste.

Even assuming as low an average price as \$6 per ton, the 240,000,000 tons consumed in industrial and public utility plants cost \$1,440,000,000. Before the heat and power inherent in all this fuel can be converted to useful purposes it must go through a series of transformations. In a public utility electric plant, for example, the latent energy contained in the fuel delivered to the bunkers is first transformed into heat energy under the boilers by the process of combustion. The heat energy is then transformed into steam under pressure (static energy); the static energy is then transformed into kinetic energy, in the form of motion, by means of the steam engine. The kinetic energy is then transformed into electrical energy in the form of kilowatt-hours by means of the generator. This electrical energy is then transformed into light by means of the incandescent or arc lamp or back into kinetic energy to run street cars, subways, elevated trains, machinery, etc. In every step, however, there is a loss, so that the energy finally delivered in the form of light and power may only be 10 per cent of the actual energy in the coal consumed to produce the final result.

35 Per Cent of the Fuel Is Wasted Up the Chimney.

Many of these wastes from the burning of the coal to the power finally delivered are susceptible of considerable reduction. Let us consider just one of the biggest losses, the heat wasted up the chimney.

The United States Bureau of Mines states that 35 per cent of the coal is wasted in this way in the average boiler plant. Just imagine \$504,000,000 escaping every year from the chimneys of industrial plants alone. This is indeed an industrial calamity. I would like to believe that the Government's engineers had overstated the case, but on the contrary my own experience, which has brought me into contact with hundreds of power plants, leads me to believe that the Government's estimate of 35 per cent chimney waste is most conservative, for I believe it to be nearer 50 per cent. As stated before, some waste is inevitable, and it will be a long time before a way is found to eliminate chimneys altogether. But a material reduction in chimney loss can be effected; in fact, in the best plants it often represents as little as 12 to 15 per cent of the heat of the fuel, instead of 35 per cent. Here is a possible saving of 20 to 23 per cent by simply preventing some of the unnecessary heat waste now discharged up chimneys.

\$200,000,000 Recoverable from Power Plant Chimneys Alone.

Even a 15 per cent saving in stationary plants would represent 36,000,000 tons, or say, \$216,000,000 saved. This saving in the industrial field alone would take care of over half of the 10 per cent shortage in production and could be brought about by but a nominal expenditure of time and money, as compared with the cost of the less than 1 per cent increase in distribution which the proposed Government expenditure of millions would bring about.

I do not mean to imply that we do not need more coal cars and a better method of producing and marketing coal. Unquestionably we are in imperative need of improvement along all these

lines. However, while we are trying to work out such problems we can help in solving them, and at the same time largely relieve our present fuel difficulties by reducing the appalling unnecessary fuel waste that is going on all about us at the present time.

The elimination of such unnecessary fuel waste is not accomplished by any magic process. Savings can be made with existing equipment with little, if any, change in design. It simply requires a clear understanding of the process of combustion on the part of the fireman and providing the available means to tell him what he is wasting. It does not require superior intelligence on the part of the fireman to reduce his losses to a minimum, but it does require some incentive such as suitable compensation for efficient results. There are scores of good textbooks, Government bulletins and technical articles that tell how to secure economy. The attendants at any reference library can advise which bulletins of the Bureau of Mines and which books and articles cover the subject in the desired manner. Also the names of such individuals who are authorities on fuel conservation.

A few dollars used to brush up on this simple problem and to teach and encourage the firemen will produce dividends in the form of coal saved out of all proportion to the amount spent.

Some of the colleges are undertaking extension courses to teach firemen how to economize in the use of coal. The University of Wisconsin, for example, is regularly conducting such classes. It sends expert instructors right to the plants to teach the men on company time. It has one class of 40 firemen from the Milwaukee city railway and lighting plant. Another course teaches heating and ventilation to public school janitors and firemen. The courses are given in several of the large cities of the State, and are all adapted to the individual needs of those taught. Other colleges are undertaking equally valuable work. These courses explain to the firemen in simple terms that insufficient air will result in incomplete combustion, hence waste; that too much air may be even more wasteful than too little because excessive air supply does not make the fuel burn any better, but, on the contrary, in many cases robs it of as much as half of the heat in the mere act of warming up the extra air which is discharged later from the chimney at high temperature; that deposits of soot and dirt on boiler surfaces act as insulators and prevent the heat from penetrating the metal of the boiler to make steam, etc. Then they are shown how to overcome these conditions by actual demonstration.

It is quite likely that the day will come when plants will not be permitted to go on wasting coal. At present it is compulsory by law to fit every boiler with a safety valve and gauge for determining the amount of water in a boiler. These are very necessary precautions to prevent explosions. Plant owners are not, however, compelled to adopt appliances that would enable them to save fuel. The mere money-saving should prove sufficient incentive to adopt economizing appliances, but in far too many cases it does not. Just as some men would rather spend many dollars in allowing a water faucet or gas connection to leak indefinitely rather than to spend five minutes in stopping the leak, so some plant owners are satisfied to waste thousands of dollars' worth of coal every year rather than to spend a few dollars in enabling and encouraging their firemen to stop the waste. There is much less waste today than there used to be. The scarcity of fuel is automatically bringing about a degree of economy, but needless waste will never be generally reduced to a minimum until power plant economy is made compulsory just as power plant safety has been made compulsory. This is bound to come to pass when public opinion forces the adoption of the principle that any man who wastes coal is squandering some other man's birthright. This principle is at the root of our present as well as our future prosperity.

When we consider the indisputable fact that nearly every necessity and pleasure of modern life is entirely dependent upon our supply of fuel, it behooves us to give some thought to its conservation not only to meet our present shortage, but to prolong the blessings that come from a supply which, be it remembered, is limited. Where would we be without cheap fuel?

Let us not forget another factor that may soon be introduced to embarrass the fuel waster. We are threatened with a revival of the United States Fuel Administration as the only feasible immediate solution of our present fuel difficulties. One of the first steps of such Government authority would either be to obtain fuel for essential industries by withholding it from non-essential industries, or to obtain enough fuel for the efficiently-operated plants

by withholding it from the persistent wasters. The latter plan was about to be vigorously enforced just prior to the signing of the armistice, and would be a most logical one to follow in time of peace. Either of these procedures would inflict untold hardships on the nation. Why should we wait for Government coercion, particularly when the savings not only benefit humanity at large, but more particularly accrue to the advantage of the fuel consumer himself.

The following quotation expresses the Government's condemnation of the careless fuel consumer during the period of the war. These remarks apply with equal force to the persistent waster of the present day.

"Why should this man be allowed, through simple carelessness, to burn twice as much coal as he needs, making his product (if its selling price is based on its cost, as it should be) cost more to its users, using up man-power and railway facilities to get coal to waste while others suffer for the want of it?"

FROM \$7,000,000 TO \$8,000,000 FOR PLANT. Corn Products Refining Co. Plans to Build a Factory in Kansas City Industrial District.

Following a decision reached after thorough investigation, the Corn Products Refining Co. will invest from \$7,000,000 to \$8,000,000 for a branch manufacturing plant at North Kansas City. A 75-acre site has been purchased, and engineers are now preparing plans with a view to beginning the construction of buildings, to be completed and equipped with machinery early in 1921. Seven reinforced concrete structures will be erected, and one of these buildings will have 100,000 square feet of floor space. When in operation with its automatic equipment of machinery, this plant is to employ 1000 operatives and consume about 25,000 bushels of corn with 10,000,000 gallons of pure water obtained from an artesian well which has been drilled to a depth of 120 feet. Syrup products will be the principal output of this Missouri branch of the Corn Products Refining Co.

Gulf Ports Committee of the Mississippi Valley Association to Be Formed.

The North Florida Chamber of Commerce, with headquarters at Tallahassee, Fla., held a meeting in Pensacola on August 6 to organize the "Gulf Coast Ports Association." Delegates attended from four States. Mrs. F. R. S. Phillips, secretary of the North Florida Chamber of Commerce, outlined the general plan in view and urged that a separate organization be formed to devote its full attention to the adequate development of all harbors on the southern border of the United States, for the safety of the country, as well as to secure for the ports a just share of world commerce.

Walter Parker of the Association of Commerce, New Orleans, executive vice-president of the Mississippi Valley Association, said he would promise that the association would create a "Gulf Ports Committee" to carry out the work desired by the North Florida Chamber of Commerce in regard to the Gulf ports. The delegates then voted in favor of creating the new department in the Mississippi Valley Association. This committee will be composed of one member from each of the Gulf ports. The plan will be given more fully after organization of the committee.

The North Florida Chamber of Commerce also adopted a resolution asking the Interstate Commerce Commission to require the building of a short link of railroad, to connect Tallahassee with Perry, Fla., to give a continuous route north and west from Tampa and South Florida points. The lack of this nine-mile link is holding back the development of that territory and causing the traveling public much unnecessary inconvenience. The Florida Legislature in 1919 passed a law requiring the completion of this road by the Seaboard Air Line Railway, but the company has ignored all requests and the several attempts of the Legislature to get them to complete their road in accordance with their franchise. Hence this appeal to the Interstate Commerce Commission, which has new powers under the railroad bill passed at the last session of Congress.

The Development of the Artificial Silk Industry in the United States and the New Plant at Hopewell, Va.

By ROBT. H. MURRAY, Hopewell, Va.

With the acquisition of approximately 250 acres of land in the industrial city of Hopewell, Va., by the Tubize Artificial Silk Co. of America, greater impetus has been given to the rapidly growing artificial silk industry in the United States.

There are now three large companies engaged in the manufacture of artificial silk in this country. Rather oddly, it occurs that each of the American concerns has a European ally. The Tubize Artificial Silk Co. of America is in alliance with Fabrique de Soie Artificielle de Tubize, with home offices at Brussels, Belgium; the Viscose Company with Courtaulds, Ltd., England, and the Du Pont Fiber Silk Co., with Comptoir des Textile Artificiels of Paris.

The American Tubize Company has an initial capitalization of \$5,000,000 and represents a combination of American capital and business genius with the technical and chemical knowledge and experience of the Belgian interests. A number of men who were instrumental in building up the European Tubize Company will direct the American Tubize Company during the period of organization and early production. These men are already in the United States, and are taking active charge of the construction of the new plant.

Hopewell, Va., was selected as the location of the first plant of this company because of its location on tidewater, the fact that considerable machinery used by the munitions works during the war could be adopted to the manufacture of Tubize silk, and particularly because the existing housing and recreational facilities offered exceptional opportunities for the development of a model industrial city. About 350 houses and seven dormitories will be taken over by the Tubize Company for the accommodation of its employees.

The plant will be new and modern in all respects. All facilities for the comfort, convenience and health of the employees is being provided, including lockers and washrooms, restrooms and cafeterias. It is expected that the first unit of the plant will be ready for operation January 1, and that commercial production will be on the market by March 1 next.

The company will give employment to over 2000 people, of which 1500 will be girls and women and about 300 boys in the silk-yarn departments, and about 500 men in the chemical and administrative departments.

This company will manufacture silk by the same process which has been so successful in the European Tubize plants. These plants are three in number, located at Tubize, Belgium, a town 12 miles from Brussels; Sarvar, in Hungary, and Tomazow, in Poland. Belgium has been universally conceded to be the home of the best artificial silk manufactured in the world, and the Tubize Company has long stood at the head of the plants engaged in this industry.

In the manufacturing of its silk the company uses the process invented by Count de Chardonnnet, modified by the improvements which it has developed. In the original process nitrated purified cotton is dissolved in ether-alcohol. The solution has a very high viscosity and is formed into filaments by forcing it through small glass nozzles immersed in water so as to remove the ether-alcohol and form a semi-fluid fiber which is picked up and wound on spools. It is then twisted, skeined and finally denitrated and dried.

Tubize artificial silk differs from the so-called "Viscose silk," in that it is based on cotton cellulose instead of upon wood cellulose, which is the basis of the latter. Silk made by the Tubize Company by the nitro-cellulose process has the advantage of being produced in fine sizes, with a beautiful lustre and soft feel. Fabrics woven or knitted from it are very popular. Tubine silk is well known in the United States at present, as from 10,000 to 20,000 pounds are imported monthly.

In order that the Tubize methods as employed abroad may be properly introduced into the American plant, it is planned to send a number of young women to the European plant to study the methods in use there. Upon the completion of their training period they will return to the United States to supervise the work of the Hopewell plant.

Dr. Emile Bindschedler, who has been with the Tubize people for 10 years, and at the outbreak of the war was the head of the plant at Sarvar, Hungary, is a vice-president and the general manager of the American company. Mr. A. Everarts, who is general manager of the Tubize Belgian Company, is in charge of the construction of the plant at Hopewell. Charles E. Merckens and Gustav Merckens of Merckens Bros. of New York city, who have been representatives of the Fabrique de Soie Artificielle de Tubize in America, have become associated with the new concern in the capacity of vice-presidents, and will have charge of the sales of American Tubize silk.

Considerable romance attaches itself to the history of the Tubize Belgian Company because of its relationship to the war. The company was founded in 1899, and was operating by November 1, 1900. In the beginning the capacity of the plant was only 400 pounds a day. The production rapidly increased, however, until in 1912 with 1600 girls and 1400 men the plant was producing 10,000 pounds per day. Almost at the same time the company purchased the artificial silk plant at Sarvar, Hungary, and constructed a third plant at Tomazow, Poland.

At the outbreak of the war, work stopped in all the plants. German troops passed through Tubize and were billeted in every room of the plant. Later, by official orders, German soldiers took away all of the cotton linters, guncotton and acid which were stored in the different warehouses. No accounting was ever made for what was taken.

In 1915 an order was issued by the German Government to confiscate all of the copper, lead, electric motors and generators, electric wiring, belting and practically all other machines which were in the plant. A group of loyal foremen and employees of the Tubize Company resolved to save what they could from the Germans. With great difficulty they managed to bury about 400,000 pounds of copper in the form of stills, pipe and machinery, together with 300,000 pounds of lead and tin. Electric motors were hidden between a concrete and wooden floors and 20 miles of belting of every size was concealed in different places in the plant. During the entire four years of the war two motor cars remained concealed in a tunnel.

Two weeks before the armistice, when the German troopers were being driven back, explosives were placed in the corners of every building, in the boilers, and even in the stacks, in order to blow up the plant. But the armistice was concluded when the battle line was 15 miles from Tubize, and the Allied troops were able to remove the explosives before damage was done.

Immediately after the cessation of hostilities all the workmen came back to the plant and began to take out what was hidden and make the necessary repairs and alterations preparatory to renewing operations. Four months after the war ended the plant was ready to run, and it is now producing 10,000 pounds daily—certainly proof of the energy and versatility of the Belgian company. The union of such an organization with American capitalists and executives should produce remarkable results at Hopewell.

Oil and Gas Activity in Braxton County, West Virginia.

Sutton, W. Va., August 12.—[Special.]—The Braxton oil and gas field is beginning to loom large in importance among the producing fields of West Virginia, although it is only within the last year that there has been development on any material scale of the oil and gas resources of the county named. In fact, it has only been within the last year or two that it was known there was any oil or gas in Braxton county. Prior to the time such a discovery was made, the coal deposits and the timber of Braxton attracted chief attention. Within the last few months a number of producing oil and gas wells have been drilled, and there is development on a specially large scale on Salt Lick, several companies having been recently formed for the purpose of drilling in that section of Braxton county.

The Cotton Industry in the Southwest

ITS HISTORY, DEVELOPMENT, GROWTH, PRESENT MAGNITUDE AND FUTURE OUTLOOK—
LAND VALUES, PAST, PRESENT AND PROSPECTIVE—COST OF IRRIGATION, YIELD AND
VALUE OF COTTON—TYPE AND QUALIFICATIONS AND USES OF AMERICAN-EGYPTIAN
COTTON.

By CHAS. M. MORGAN, Publicity Director Arizona American-Egyptian Cotton Growers' Association, Phoenix, Ariz.

[The recently established cotton-growing industry of the Southwest is described herewith from the standpoint of the Arizona grower. We recently printed an article by a disinterested observer, Mr. Crittenden Marriott, who wrote of limitations on the area suitable for cotton growing in the territory between Phoenix, Ariz., and Sacramento, Cal. Depending on irrigation and excluding the vast area devoted now to fruit, grain, etc., it was estimated that the area on which cotton could be profitably raised would total about 2,000,000 acres. This is an important fact to bear in mind in connection with an attempt to appraise the potentialities of cotton growing in the irrigated sections. Another point of exceeding interest brought out in the following article is the fact that irrigated lands in the Southwest sell at from \$300 to \$900 an acre, and that a water tax of \$3.75 per acre, minimum, is unavoidable where cotton is raised in irrigated sections. Compared with the maximum of \$200 an acre for Southern cotton lands, and the \$50 or less of the average, these figures are highly significant and suggestive. The Southwestern cotton belt is of decided interest and importance, nevertheless, in view of the fact that a \$20,000,000 crop is now produced, whereas the industry had its inception but a few years ago. The comprehensive presentation of the whole subject herewith will be found of great interest to readers generally, we do not doubt.—Editor Manufacturers Record.]

That the cotton-raising industry in the irrigated but formerly arid regions of the Southwest is a decided success, that it is a profitable and will be a permanent industry, that an exceptionally fine type of cotton is produced, and that there are many decided advantages in producing cotton in these regions is not only the opinion of the "boosters" for this section, but of the world's foremost cotton experts.

In his "Mather Lecture," delivered this year before the Textile Institute in Manchester, England, Prof. John A. Todd, conceded to be one of the foremost cotton experts in the industry today, speaks of the cotton industry in the Southwest, and particularly in the Salt River Valley, in the highest terms.

The lecture was entitled the "World's Cotton Requirements and Future Supply," and in speaking of this section Professor Todd says: "These new irrigated districts of the Far West are the most interesting and the most hopeful of the new developments that have taken place in the American Cotton Belt in recent years.

"In the Salt River Valley the industry has been taken up in a most efficient manner by a small number of big business men with ample financial backing. They have organized the whole district on a community basis, and have carefully regulated the seed supply, with the result that the whole district is now exclusively under one type of cotton, known as 'Pima,' an excellent variety of Egyptian selected from the first varieties imported from Egypt. It sometimes exceeds $1\frac{3}{4}$ inches in staple, and is of excellent character, the best of it being quite equal to the best Egyptian Sakel, except that the ginning outrun is about 26 per cent.

"The quality of the cotton is so good, and the demand for it so great, that there is no doubt of the permanent success of the industry."

More concrete evidence of the success of the cotton industry in the Southwest is the fact that the past season the Salt River Valley produced a crop worth \$20,000,000, and that this year the crop for the entire district, including the Imperial Valley, will undoubtedly exceed \$100,000,000 in value, and the acreage of Pima, or American-Egyptian cotton, is rapidly increasing and will probably dominate the situation next year in other parts of the Southwest as it does now in Arizona.

Arizona Cotton History.

While cotton has been raised in Arizona by the aborigines since the dawn of Western history, as is evidenced by the frequent discovery of cotton cloth in the ruins of long-departed tribes, the modern cotton industry, which has brought such prosperity to the former haunts of the horned toad and the Gila monster, is a matter of quite recent development.

The first Egyptian cotton was introduced into Arizona by the Bureau of Plant Industry in 1900, at Yuma. Tests showed that of several varieties, the Mit Afifi was apparently best adapted to Southwestern conditions. Development and acclimatization was carried on until in 1908 a "sport" or mutation, greatly differing from the parent Mit Afifi, was found in a progeny row. The plant was named the Yuma variety, was longer and finer in staple, and in a short time a considerable acreage was devoted to its culture.

In 1912, 280 bales were produced; in 1913, 2200 bales; in 1914, 6187 bales; in 1915, 1095 bales; in 1916, 3331 bales, and in 1917 the production jumped to 15,966 bales.

Meantime, in 1910, Pima cotton, now claimed to be the world's finest cotton, had been discovered in a progeny row of Yuma cotton at the Indian agency at Sacaton, Pinal county, Arizona, on the Gila River.

Pima cotton was discovered as a single "sport" or mutation plant of the Yuma, just as Yuma was the offspring of the imported Mit Afifi. A progeny row of the seed from the new plant the following season demonstrated that a new and superior variety, true to form, had actually been discovered.

The color of the new cotton was lighter, the fiber longer and finer and silkier, and the length increased to an inch and three-quarters. The Department of Agriculture supervised the growth and development of the new variety. Strong land was selected for planting, in places remote from other cotton. The resulting seed cotton was ginned on a gin used for no other cotton, and the seed carefully sacked and stored. During the growing season each field was carefully rogued of off-type plants, of which there was a surprisingly small percentage. This practice, insuring the best possible seed, has been continued to the present time.

The acreage and yield of the new Pima variety increased almost as fast as the seed supply became larger. During the season of 1916-17 there was produced 253 bales of the new cotton, and the production rapidly increased until during the past season a little more than 40,000 bales were produced in the Salt River Valley from between 80,000 and 90,000 acres of land, Pima having the exclusive right of way in this district, its superiority having entirely crowded out the older varieties. Today the sentiment in the valley is so strongly for this type of cotton that no grower would venture to plant another sort, lest his neighbors take it most unkindly that he should jeopardize the supply of pure seed.

The yield per acre of Pima cotton varies as largely as do the types and characteristics of the men growing it, and the types and characters of soil on which it has been planted.

The average yield has been about half a bale (250 pounds) of lint per acre, with low points below that, and the top more than double. Many yields above a bale to the acre have been authenticated. A rank amateur named Lietzel raised right at the start one and a quarter bales to the acre in the Glendale district. A former physician named Bishop, in the Scottsdale district, raised 37 bales on 30 acres, half of it in fruit trees with cotton between the rows. Another competent grower on ordinary land, properly handled, raised 167 bales on an ordinary quarter-section.

It is largely a matter of good or bad farming, and of the use of good judgment in selecting the land to be planted to cotton. All the land here that will raise anything will raise cotton, to be sure, but some of it will raise a lot more cotton than other types.

It has been an unfortunate condition in this section that in times past many growers have been compelled to sell at the beginning of the season, at whatever prices were offered, for the reason

that creditors were pressing them and they could finance their cotton no further than to the gin.

This is being changed this season. Through the efforts of the farmers' organizations a limited amount of bonded warehouse space will be available this season, and more next year, and the money made available to loan on the warehouse receipts, and this will help the marketing situation materially.

Up to the present season, however, Pima cotton had not made much headway in replacing other types in the Yuma and Imperial Valley districts.

This condition is, however, rapidly being changed for the better in these districts.

In the Yuma district, for instance, there was practically no Pima cotton last year; this season more than half the acreage is in Pima long staple, and the present prospect is that next year there will be but little short and inferior cotton in the district. The same thing applies to the Imperial Valley, where a large acreage is planted this year and will undoubtedly increase.

There are several reasons for the change. The missionary work done by the Southwest Cotton Co., a subsidiary of the Goodyear interests, has been of material help. Their activity in advocating Pima long staple, of course, is predicated upon the fact that they desire to purchase much more of this cotton for tire cords and fabric than they can possibly produce on their own immense ranches in the Salt River Valley, where this company owns more than 30,000 acres, the largest single interest producing this type of cotton.

The high prices of cotton the past year, particularly for this splendid variety, which reached the high point of \$1.35 per pound last season, and shows a fair prospect of an average price this year above a dollar per pound, has had a tremendous influence in spreading the variety over a larger territory.

In addition, the farmers of the Southwest are coming to a realization that they are blessed with a peculiar condition of climate, soil and moisture control that enables them to produce this extra fine cotton, and that to compete with short cotton is ruinous. To quote a homely phrase used in this connection by a speaker at a farmers' meeting this spring: "It is as foolish for a farmer here to plant short cotton as it would be for a high-class mechanic with plenty of work to take a job digging ditches."

The future outlook for the production of this fine cotton, then, is good; the production which has already gone up by leaps and bounds bids fair to continue its increase until there will be produced a quantity of this cotton sufficient to at least partly meet the demand.

Demand and Uses.

It might be well to consider what the demand is for this type of cotton, for what purposes it is used at present, and what is the probable future of the demand, having reached the conclusion that the supply will continue to grow.

It is not too broad a statement to make that Pima cotton is the finest cotton the world has yet seen. Finer cotton may yet be developed, but it has not yet appeared. In length and uniformity, in tensile strength, in spinning qualities, in ability to take finish, in fact, in every desirable quality, Pima leads the field.

This means, then, that for any use where length of fiber, strength and finish are desirable this cotton is the most logical. True, many makers of high-strength fabrics and high-finish fabrics have never used Pima cotton, but the reason has been lack of supply, not lack of demand nor lack of desire to secure it.

So far, most of this cotton has been used for making cords or fabrics for high-class automobile tires. For this use alone more than 500,000 bales would be used now, if there were any such production. Certain thread companies are using this cotton and producing thereby the strongest of thread. Some fine mercerized goods have been produced from Pima cotton, and the mills that wove it would like to use it exclusively. The demand will long exceed the supply.

So far as the opportunity of securing this cotton is concerned, it is now a fair field with no favor. Time was when there was little competition in buying, there being little production to spread around and little chance for the outside buyer to get into the field.

But in the past year this has all been changed. The independ-

ent growers now have a strong marketing association, a branch of the American Cotton Association doing business under the name of the Arizona-Egyptian Cotton Growers' Association, with State headquarters at 27 North Central, Phoenix. This organization, less than a year old, made such a signal success last year of securing higher prices for the membership by selling to outside and competitive buyers that the membership now is more than four times the last year's total, and will undoubtedly pass the 50 per cent mark before cotton-selling season this year.

This organization realizes that the future of this cotton industry depends upon its wide and not its restricted use, and it, therefore, makes a specialty of dealing with the representatives of mills desiring a supply of extra fine cotton, but does not desire to go to the expense of hunting up the cotton from the individual grower.

By this means the market for this type of cotton is being broadened, enabling the users to secure a supply that could not otherwise be obtained without too much expense. By encouraging competition the organization is also helping to maintain prices at a level high enough to give the grower a fair profit, while prices are not exorbitant from the mill standpoint.

The association, in addition to keeping its members at all times informed of the value of their cotton, as well as the market price, grades the cotton and maintains the selling bureau, and carries on a campaign of education among the growers on such matters as cultural methods, cost accounting, irrigation practice and other matters of interest and advantage to the cotton producer.

Land Types and Values.

The types of land in the Salt River Valley and other irrigated districts of the Southwest vary all the way from the lightest of sandy loam to the other extreme of gummy black adobe, and with all grades in between. In general, the land is of unusual fertility, even when just reclaimed from the desert, though usually lacking to a certain extent in organic matter. This, however, is soon supplied by a few years' cultivation, particularly in alfalfa.

Add to the fact that the land is of unusual average quality, the long-growing season, making possible two grain crops per year, four to eight cuttings of alfalfa, or the growing of the long-season Pima cotton, with moisture conditions under almost control by irrigation from an unfailing source of supply, and you have a sort of bird's-eye view of farming conditions in the Southwest.

To be sure, land is high, justifiably high, and in the long run will continue to go higher until it reaches the point where its value is based upon its capability of returning an average annual profit of fair proportions upon the value.

This is far from being an exclusive cotton section; in point of fact, cotton must compete with many other profitable crops—crops that yield profits themselves that are more than commensurate with the value of land in this section.

Wheat is a highly profitable crop; wheat men this season having taken off grain to the value exceeding \$150 per acre, and this can be followed the same season by a crop of maize, hegeria, or feterita, worth between \$50 and \$75 an acre additional.

Grapefruit and oranges have proved successful in the foothills around the valley and the higher slopes below the main canals yielding around \$250 per acre. Dates are successful, though the acreage is not yet large enough to give average figures.

Alfalfa was for many years the pride of this valley, yielding up to six cuttings and from four to seven tons per acre. It is worth around \$30 per ton.

The finest cantaloupes in the Southwest, or any place else, are produced in the Salt River, Yuma and Imperial Valleys, yielding \$250 per acre and upward, and some gardeners in the Salt River Valley have followed cantaloupes with winter lettuce, receiving for the second crop up to \$380 per acre. This is recognized as one of the prize dairy districts in the country; it also grows profitably and successfully peaches, apricots and other fruits of that type, olives, and too many other things to enumerate.

No; Pima cotton has competition, keen competition, from other crops, and it is only the fact that prices are high enough to make it a more profitable crop, handling considered, that makes it the popular crop that it has grown to be. If the price of cotton, through any combination of "bears," should be forced down to where the margin of profits became unsatisfactory, our farmers

in the Southwest would calmly go into other crop production that did yield a profit.

Improved farm land has sold in this district, where everything was exceptionally favorable, up to \$900 per acre, but there is still much desirable land, under crop, with good water, at from \$300 to \$600 per acre, often sold on exceptionally good terms.

The writer was reared on a farm in Indiana, where we figured the value of land on a 6 per cent net return basis. At this rate there is land in the Salt River Valley that is worth, on a profit basis, \$5000 or more per acre. Of course, no such value is ever anticipated, and equally, of course, no such basis is used any longer. But figure the value on a 20 per cent return basis, or a 33⅓ or a 50 per cent basis, and still the present values are well below the real value based on net returns. Last year there were numerous instances in this valley where the net returns for the season were above the price for which the land could have been purchased the previous spring.

It is, then, more than probable that the present high prices will go materially higher.

Water for irrigation in the Salt River Valley this year cost \$1.60 for the first two-acre feet, 80 cents for the third, \$1 for the fourth, \$1.50 for the fifth, and if a man wanted more than five-acre feet he had to appear before the Board of Governors of the Water Users' Association and show cause why. Considering the fact that the biggest yields of Pima cotton have been raised on but little more than two-acre feet of water, there are but few cotton growers who will have cause to appear. Next year the first two-acre feet of water will cost \$3.75, it is announced, owing entirely to the increased cost of operation of the project, but even that rate is low as compared to the cost of other sources of water.

The total assessment against the land under the project, to pay back to the Government the money advanced to build it, is \$56 per acre, payable over a period of 20 years, beginning in 1917. The total cost of the project, something over \$11,000,000, looks small when compared to the crops produced in the Salt River Valley last year, the total value of which was approximately three times that figure.

As stated above, the cotton crop alone in the valley last season was worth fully \$20,000,000, and would have been worth more if more of it had been intelligently marketed.

Cotton Pests Have Not Yet Appeared.

There are no cotton pests of any particular importance in the Southwest, and if strict quarantine regulation, strictly enforced, can keep them out they will certainly stay out. No cotton or seed from any district outside Arizona is allowed to enter the State, and not even intrastate shipments among the counties are permitted except by special arrangement and permission. While the theory has been advanced that the bollworm and the boll-weevil would not flourish here on account of the summer heat, entomologists do not endorse the idea, and the Southwest will never be found willingly trying the experiment.

Cotton will continue to be the leading agricultural product of the Southwest, in the opinion of practically all intelligent observers. It might have been otherwise but for the fact that the cotton growers are rapidly becoming organized and educated up to a realization that by co-operation they can better secure their labor, can keep their seed supply pure, secure better prices and create a wider demand; in brief, that in co-operation is the true answer to the problems that inevitably confront any district that specializes in any one product and that soon or late usually ruin this leading industry.

That other industries will come to the Southwest as the result of the production of Pima cotton is not to be doubted, and in point of fact there have been several tentative investigations looking to the establishment here of spinning and possibly fabric mills.

Citizens of Hancock county, West Virginia, at a special election held recently voted to authorize a bond issue for the construction of a new \$100,000 courthouse at New Cumberland, the county-seat. It will replace the courthouse destroyed by fire in March of the present year. Bonds to be issued will run for a period of 25 years.

The Revaluation of North Carolina Property.

Raleigh, N. C., August 14—[Special.]—Governor Bickett has made a splendid presentation to the Legislature on the great question of the revaluation of all property in North Carolina. The Legislature at the last regular session made provision for the revaluation and the State Corporation Commission completed the latter August 9.

The results are astonishing. In 1907 the total valuation of all property, real, personal and corporate, was \$1,099,120,000; now it is \$3,129,705,000. Over 1,000,000 acres of land not heretofore on the tax books was discovered and put on; of this, 80,000 being in one county, Onslow; an area equal to four average counties, as the Governor put it. The two leading counties under the new valuation are Forsythe, \$147,321,223, and Mecklenburg, \$141,406,625. Not one of the 100 counties falls under \$1,000,000. Scotland leads in the largest valuation per capita, and it has the lowest tax rate.

Last year the total revenue collected was \$16,036,265 by the State and counties. The constitution now fixes 66⅔ cents as the limit of taxation on the \$100. Thanks to the new valuation, Governor Bickett asked that the limit be reduced to 15 cents on the \$100. He made a profound impression by this call, and added that it is now clearly certain that North Carolina is the very richest State in all the South per capita, and when this Legislature adjourns we will have the lowest tax rate per capita in all the Union.

The revaluation figures, as submitted by the Corporation Commission and announced by the Governor, are as follows: Real property, \$1,981,563,494; personal property, \$803,552,925; railways, \$250,587,158; cotton mills, \$205,581,304; tobacco manufacturing companies, \$93,787,174; power companies, \$56,484,094; banks, \$35,247,693; woodworking and furniture factories, \$24,728,628; knitting mills, \$19,972,015; cotton oil and fertilizer plants, \$5,961,462; grain mills, \$1,745,105; vehicle manufacturers, \$1,240,670; miscellaneous, \$9,302,788; corporation excess, \$20,832,385.

In round numbers the gain over 1919 is as follows: Real property, \$1,475,000; personal property, \$377,000; railways, \$125,000,000; cotton mills, \$147,000,000; tobacco manufacturers (property), \$54,000,000; power companies, \$48,000,000; banks, \$14,000,000; woodworking and furniture factories, \$16,000,000; knitting mills, \$12,000,000; cotton oil and fertilizers, \$2,600,000; grain mills, \$1,000,000; vehicle manufacturers, \$750,000; miscellaneous, \$6,000,000.

West Texas to Promote Legislation for Development of Its Resources.

Tahoka, Tex., August 14—[Special.]—Practically all of the towns and representative business interests of West Texas have joined forces in an effort to obtain for this part of the State such legislation as may be needed to promote the development of its resources. In keeping with this movement a legislative bureau has already been established at Austin. It is asserted by men who back this plan that it does not have for its purpose the dividing of Texas into two States, as is charged by some of the newspapers of East Texas. It is pointed out that the interests of West Texas have long been ignored by the Legislature; that there is nothing in common between East Texas and West Texas; that the climatic, agricultural and other conditions of the two divisions of the State are entirely different. In West Texas wheat, corn, maize and other grains such as are indigenous to the Middle Western States are grown, as are also apples, cherries and other fruits. It is asserted that East Texas is typically a part of the so-called "Old South," with cotton as the staple crop. There are no negroes in West Texas, while in many counties of East Texas blacks form the bulk of the population.

Geographically, the 98th meridian is the accepted dividing line between East and West Texas. This line starts on the Red River and runs south, passing just west of Fort Worth and to the east of San Antonio, striking the Rio Grande midway between Brownsville and Laredo. Practically all of the immigration of this State is going into West Texas. This is shown by a comparison of the population figures for many years past.

Oklahoma Cotton Growers for Co-operative Growing, Warehousing and Marketing

PLANNING TO ADOPT ADVANCED SYSTEM OF CALIFORNIA'S CO-OPERATIVE FARMERS' ORGANIZATIONS.

Oklahoma City, Okla., August 14.

Two million cotton growers, several thousand cotton buyers and merchants and allied business interests throughout the Southern States are more or less interested in the co-operative organization plan of the Oklahoma Cotton Growers' Association, which is now being put over. The plan provides for the co-operative growing, warehousing, grading, stapling and selling of a minimum of 300,000 bales of the Oklahoma crop of cotton for a period of seven years beginning in the fall of 1921. Only the actual cotton farmers and landlords who receive cotton as rent can be members of the association.

Most of the cotton buyers, commission merchants and some bankers say the plan will not work. Nearly all of the cotton growers, half of the bankers, most of the country merchants and all of the agricultural extension workers and bureau of markets forces say the plan will work. The drive is on. Five months, from August through December, are to be devoted to the preliminary campaign—lining up the business and financial people on the make-it-go side and holding meetings and spreading the gospel of the co-operative plan all over the 53 cotton counties, so the farm folks will be in a favorable mood and ready to sign up when the seven-year agreements are passed, around next January, February, March and April.

Leaders in the movement are having no trouble getting all the advance money they need from the banks, business men and large farmers. It is estimated that the campaign between now and January will cost upwards of \$100,000.

The plan was drawn up by Aaron Sapiro of San Francisco, legal counsel for 14 of the large co-operative farmers' organizations on the Pacific coast, which have over 80,000 grower members and co-operatively handle and sell more than \$300,000,000 of farm products annually. Mr. Sapiro has been employed as counsel for the Oklahoma Cotton Growers' Association, and will make an occasional trip to Oklahoma to help the organizing forces keep things going straight. The association has also employed S. G. Rubinow of North Carolina as full-time secretary. Mr. Rubinow, who was formerly assistant director of extension and also director of the North Carolina campaign for the American Cotton Association, is now on the job in Oklahoma. Other chief workers on the plan in Oklahoma include Eugene P. Gum, secretary of the Oklahoma Bankers' Association; N. R. Graham of the Exchange National Bank of Tulsa, D. N. Fink of the Commercial National Bank of Muskogee; Carl Williams, editor of the Oklahoma Farmer-Stockman; J. P. Connors, large merchant, planter and banker of Canadian; J. A. Whitehurst, president of the State Board of Agriculture; J. A. Wilson, director of farm extension in Oklahoma; Walter Colbert, farmer and merchant of Ardmore, and many others. There is no lack of leaders, and about every farmer, big and little, yet heard from has expressed himself favorably and is a community worker and booster for the plan.

The Oklahoma plan is entirely different from the plan of the American Cotton Association. The Oklahoma plan is really the California plan of co-operatively growing, handling and selling prunes, eggs, lemons, oranges, cantaloupes and raisins, only the plan is revised and switched around to make it directly and specifically adapted to the co-operative growing, handling and selling of Oklahoma's cotton crop.

The Oklahoma association will incorporate and start business when growers of 300,000 bales of cotton have been secured as members. If the organizing forces fail to obtain that many members, it is a question whether it will stop or go ahead. The leaders are not counting on any failure; they firmly believe growers of 500,000 bales, or about half of the State's crop, will be signed up during the January-to-April membership campaign.

Here is what the association proposes to do:

It will grade, class, staple and weigh each bale. This will place a true value on the cotton in terms of quality.

It will warehouse and store cotton wherever and whenever

necessary. This will at once reduce the tremendous loss from country damage.

It will sell all of the cotton in even running lots, each grade class and staple within its own pool. This will insure a higher price than can be obtained in any other way.

It will sell on its own samples and warehouse certificates. This will again reduce another heavy loss known as the "city crop."

It will sell collectively and only when the market demands it. This will at once reduce speculation.

It will sell its cotton as directly to the spinners as possible. This will eliminate some of the present wasteful methods.

It will determine the cost of production. This will assist in asking a price that will be satisfactory to both producer and consumer.

It will encourage and develop the co-operative production of uniform and standard varieties. This will assist still further in pool selling and in securing a better price, or a larger percentage of the price the spinner pays for cotton.

It will advise with growers on production methods and problems. This will be essentially helpful and profitable.

The association will own its warehouses, and there will be as many warehouses as necessary at every point where enough cotton is brought in to be warehoused. Where are they going to get the money to build these warehouses? Bankers of Oklahoma have already indicated very clearly that legal contracts calling for the delivery of at least 300,000 bales of cotton a year for seven years make pretty good security, and the organizers are not worrying about finances, once the association is put on its feet with enough memberships to start with.

This is not to be an association run by amateurs. When the association is ready to start business it will hire the ablest managers obtainable in this country. They are already talking about paying a general manager \$15,000 to \$25,000 a year, if necessary. And every employe of the association will be a real cotton man, a specialist in his line. The Oklahoma association realizes that farmers are producing cotton all the year and have no time to devote to the marketing end of the business; therefore, it will hire "marketing brains"—all it needs. They figure it will not cost the farmers and their association any more to hire "brains" than it now costs the big buying and commission firms. The Oklahoma association will maintain offices at New York, New Orleans, Liverpool, Manchester, Havre and other points, if necessary, and they say it will be necessary.

Four or five field men are now going about the State spreading facts and figures about the association. As time goes on more of these field men will be put to work. The county agents in the cotton counties of Oklahoma have virtually been "turned over" to the Oklahoma Cotton Growers' Association during the campaign period. The way things look now, the association will go over without a hitch.

\$5,000,000 Fiber Company at Hopewell.

Capitalized at \$5,000,000, the Hummell-Ross Fiber Corporation has been chartered to establish a plant at Hopewell, Va. This enterprise will be under the management of the Hummell & Downing Company of Milwaukee, which recently purchased Hopewell buildings and announced its plan to equip these structures with machinery for manufacturing paper board, strawboard, woodpulp and general fibrous products.

Birmingham Glassware Manufacturing Enterprise.

General glassware will be manufactured at Birmingham by the Birmingham Glass Manufacturing Co., which has been organized with \$400,000 capital to build a plant, having purchased land estimated to contain several million tons of silica sand for glass manufacture. Sol. W. Quinn of New York is president; H. C. Bryson, also of New York, is vice-president and general manager, and E. R. Owen of Birmingham is secretary-treasurer.

A New York Cotton Exchange Member Who Knows the Inside Facts Outlines the Cotton Situation

New York City, August 9.

Mr. J. S. Wannamaker, President,
American Cotton Association,
St. Matthews, S. C.:

Dear Mr. Wannamaker—One of the most important, and, in fact, the most important duty facing our people and nation today is the protection, promotion and upbuilding of agriculture nationwide. It is of supreme importance, at this crucial period in the history of the world, that the Government concentrate its efforts for the purpose not only of developing our agriculture along all lines, but for the further purpose of putting the handling and marketing of same upon an economic, efficient and business basis. The markets of the world should be open to our products unrestricted. Unless the people of the world are furnished with an opportunity to become busy, how can we re-establish peace and promote prosperity? I am not only one of the oldest living members of the New York Cotton Exchange, thoroughly familiar with all its rules and regulations from a standpoint of actual experience extending over a period of some fifty-odd years, but I have also, as a result of being actively engaged in the cotton industry and as a result of having studied the various phases of the cotton question for the last 50 years, become thoroughly familiar with the various lines of the cotton industry from a standpoint of actual experience as well as study.

I have watched with intense interest your efforts to put the handling and marketing of the American cotton-producing industry, which furnishes 62 per cent of the cotton produced in the world, upon an efficient, economical and business basis since you first started your movement in 1914, at which time the press, not only in the North and abroad, but even in sections of the South, were very antagonistic toward your movement. Today, as the result of your work, you have free access to the press and the friendly co-operation of same both at home and abroad. This is due to the fact that the world has entirely reversed its judgment concerning the cotton-producing industry as the result of your untiring efforts. You have thoroughly convinced the world that the South will not produce and sell its cotton crop under the condition it has since the 60's, nor will they continue to produce cotton and sell it for less than a fair and profitable price. The world was amazed to learn the true conditions. The fact that in 1820, 87 per cent of the population in America was engaged in agriculture, while 100 years later, in 1920, only 32 per cent of the population is engaged in agriculture, is a matter for serious consideration by every thoughtful person. There are 2,000,000 families engaged in cotton producing, and of this number, 62 per cent do not own their homes, are tenant farmers, and the entire family, including the wife and children, is laboring in the fields. There are also engaged in the agricultural fields in America 1,807,472 women. Of this number, 1,535,329 are engaged as agricultural laborers in the cotton fields of the South. The enormous loss in the handling and marketing of the American cotton crop, amounting to the loss of one entire crop out of every ten, or, based upon the present price of cotton, \$200,000,000 per year, inflicts a fearful penalty upon the producer and consumer, and, of course, should be removed.

The world has rendered a verdict in your favor, and, based upon the estimated capital invested in raw cotton production in America of \$2,428,000,000 and the invested capital in the cotton manufacturing of America of \$1,500,000,000, the raw cotton-producing industry has absolutely failed to receive anything like just compensation. Cotton producing is by far the most hazardous line of industry has absolutely failed to receive anything like just compensation. Cotton producing is by far the most hazardous line of industry has absolutely failed to receive anything like just compensation, and should have secured great wealth as the result of the production based upon these conditions.

The world will need an enormous increase in all lines of production, both food and clothing. The increased demand for raw cotton will be truly startling. This is conceded by leading economists both at home and abroad. It is also conceded by thinking people everywhere that it is of vital importance to the best interests, not only of our nation, but the world at large, that every effort possible be used to promote and protect agriculture and to

furnish the products to the nations of the world, so that they can become intensely busy. No product that comes from the soil can perform a greater service in promoting peace and prosperity than raw cotton. Therefore, I view with extreme alarm practices being conducted in certain phases of the cotton industry today. Cotton futures are frequently from 300 to 500, and in some cases 800 to 1000 points below spot cotton. Every known effort by combinations of manipulators has been made to counteract the effect of your work. On three separate occasions special committees from the New York Cotton Exchange have unanimously recommended that a contract purchased on the New York Cotton Exchange carry with it the privilege to receive cotton so bought from Southern warehouses of certification. Still this reform has never been put into effect. What function does the contract perform today? Most assuredly the mills cannot hedge with it. A contract on the New York Cotton Exchange today is absolutely a seller's contract. A seller has the privilege of delivering any one of the grades for delivery under the Smith-Lever act. The buyer has no voice therein. The buyer, of course, should have an equal voice with the seller. The contract should be so changed that it will be an investor's contract, and not a gambler's contract, pure and simple, as it is today.

No student of economics, in fact, no one endowed with the slightest degree of common sense, can fail to realize that the producer has failed to receive anything like a fair price for his cotton for a long time past. Mills in this country and England show enormous earnings. How would it be possible to make these earnings if a fair price were paid for cotton? Either the consumer is being charged a price far in excess of a reasonable price for the manufactured product, or the producer is failing to receive anything like a fair price for his raw cotton. Certainly one would be lacking in common sense after examining the enormous earnings as shown by the mills, both at home and abroad, to reach any other solution. England is doing an enormous business, breaking all previous records. For the first six months of 1920 England's total export trade amounted to almost \$3,500,000,000; this sum exceeded in money value the export business during the entire year of 1913. This remarkable result, I understand, is due to an arrangement made in November, 1914, between the Government, banks, associations of chambers of commerce of the United Kingdom, by which solvent traders were to be advanced 50 per cent of the amount due to them by the foreign traders who were in their debt, to be used by the trade to continue their business and pay debts due to the other manufacturers. An enormous proportion of this export business from England was as the result of the manufacture of American cotton. Do you people realize that your methods of marketing are 50 years out of date? Why should you sell your cotton to be received and settled for in Europe, subject to six months' reclamation, then if you wish to arbitrate a difference in dispute the arbitrators are English members of the Liverpool Cotton Exchange? Most assuredly it is time to make a complete change in the handling and marketing of this American crop, which will be of greater need to the world than at any time in our previous history. First, economic reforms; build warehouses in every county sufficient to hold the crop produced therein, owned and controlled by your farmers, merchants and bankers. Your colleges can certainly educate young men to grade and market your cotton, secure Government graders and form co-operative marketing associations. The same have successfully operated throughout Europe for the last 50 years. In Holland the producer receives 97½ per cent of the amount paid by the consumer, and largely throughout Europe the producer received 90 per cent, while in America he receives only 50 per cent on agricultural products, except on cotton, for which he receives far less. Your cotton should be properly baled at the gin, should go from the gin to the warehouse, the sale of same stretched over a full 12 months' period, only being sold when the manufacturers will send their buyers to the warehouses in the South and pay you a profitable price. If you have not sufficient financial institutions to finance your cotton warehouse receipts, the most valuable security in the world, then you should form additional banking institutions. Fol-

low the example of old England and new England and form mutual insurance companies. This would save you millions in insurance.

Co-operative marketing associations should be formed in each county in the cotton belt, your cotton to be placed in the warehouses and sold through expert marketing men and licensed graders. Then each of these county units should be coupled up under a great State unit, with State headquarters. Then each State should be coupled up under one central organization. Co-operative buying and selling will be the modern business method. It means efficiency, economy and enormous savings. (1) your warehouse, (2) your county marketing associations, (3) your State marketing associations, (4) your mutual insurance companies, (5) your financial institutions, can each form a link which will complete a great organization through which the raw-cotton industry can be absolutely controlled. The American Cotton Association will be the great educational institution, a blanket covering the whole organization. The minimum price your association names, after you have completed this organization, will mean absolutely that this price must be paid to secure cotton.

Your efforts to have all American grades designated by the Bureau of Markets, to have State laws passed confirming these grades, also national laws, so that the American cotton crop will be sold upon American grades, will meet the approval of every legitimate line of the cotton industry. Leading economists have confirmed your contention that the manufacture of cotton is absolutely controlled by certain foreign interests in co-operation with interests in America; that the interests so controlling the cotton industry come from a section of the world only composing one-third of the population of the world; that the use of cotton is in its infancy, and that in justice to the cotton producer, as well as to the commercial life of the nation, united efforts should be made to broaden the markets for American cotton world-wide, removing all restrictions and monopolies that prevent same. It is readily conceded that there will be an enormous increased demand for American cotton; that the serious question will be a sufficient supply, and you will not be worried with overproduction if restraints and restrictions can be removed so that cotton, a world necessity, can have world markets. There is no question but that had there been unrestricted markets for cotton for the last 50 years it would have brought such an active demand for cotton that it would have resulted in bringing to the producer a price far in excess of the price he has received. It would have resulted in making the South the most prosperous section in America; would have brought benefits nation-wide.

As stated above, regardless of the fact that as a result of this world-wide campaign, started in 1914, you have won a verdict from the world. However, you can rest assured that the cotton producers of the South are today facing the most thoroughly organized, systematic fight ever recorded on the part of those who have long controlled the raw-cotton industry, to beat down prices and to prevent the economic changes in the handling and marketing of the American cotton crop, which will take from them the power to manipulate prices. There can be no question but that by placing the marketing and handling of the cotton industry upon an economic, business basis, enormous economic savings will result therefrom, and in addition to this, benefits will come to both the producer and the consumer. However, it means a complete change in conditions that have existed for the last 50 years. It means that people who have accumulated enormous wealth as the result of the power they exercise over the raw-cotton industry and the antiquated methods in handling and marketing same will be denied to longer exercise this privilege. This means, of course, a mighty struggle. The attention of the world is today upon the cotton industry of the South. You are face to face with the issue. There is no way to dodge it. Who shall control the raw-cotton industry? Shall the producer have the privilege of handling and marketing his product; selling same upon supply and demand; receiving a profitable price based upon the cost of production and the price for which the manufactured product is selling; or shall those who have long monopolized this great industry be permitted to continue to control same? You should not only have the united co-operation and assistance of the entire agricultural interests of the South, everyone in the South interested in the up-building of the South, but in addition to this you should have the co-operation and assistance of everyone in the nation interested in promoting the general good, as this question touches every sec-

tion of our country. Agriculture is of such tremendous importance today, especially the production of cotton, that you should have the assistance of both State and National governments in putting the cotton industry upon a strictly business basis, for it is certainly the duty of the Government to protect, promote and upbuild agriculture nation-wide. The Government should render not only advice but financial assistance in putting the handling and marketing of the American cotton crop upon an efficient and economical business basis, and see that cotton, a world necessity, has unrestricted access to the markets of the world.

The leading economists throughout the various sections of the world unanimously confirm the statement that, while for the last decade we have used in the world an average of 23,000,000 bales of cotton per annum, we are facing the absolute certainty of an enormously increased demand, and that we should have at least 15,000,000 bales from the growing crop in America to fill the legitimate pressing demands for cotton.

The South has the opportunity as never before to protect itself. Self-preservation is the first law of nature. For the last 60 years the South has fattened the world by clinging to a one-crop system—cotton. Today the farmers of the South can fatten their pocket-books by planting large areas in food and feed crops to fill an unheard-of demand at profitable prices. Anyone with common sense will readily realize that we are facing a great shortage of food. The cotton producer is short of labor. He can raise his food crops with less labor, less expense and less hazard, planting only his surplus lands in cotton. His lands this fall should largely be planted in small grains. This will convince those who are beating down the price of cotton that the cotton producer is in dead earnest; that he will no longer tolerate conditions that have previously existed. If he is not allowed a just share of the profits for the enormous investment he has in cotton, the enormous expense of planting the crop, the great hazard in producing it, he will produce other crops and not continue to enrich the balance of the world upon his poverty.

I commend your work in the strongest terms and urge that you not cease your efforts until the cotton producer of the South has gained the right to market his own cotton crop, in the proper economical manner at a profitable price, removing from the market especially the combination of powerful interests in England and America in co-operation with the gamblers.

I feel that I can speak with some degree of accuracy concerning the cotton question. Sincerely yours,

(Signed) WILLIAM RAY,

(Formerly of Wm. Ray & Co., Members of the New York Cotton Exchange.)

The Cotton Movement.

In his report of August 13, 1920, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 13 days of the season was 86,048 bales, a decrease from the same period last year of 40,363 bales. The exports were 59,286 bales, a decrease of 171,163 bales. The takings by Northern spinners were 28,260 bales, a decrease of 30,812 bales; by Southern spinners, 82,156 bales, an increase of 4276 bales.

Southwest Water-Works Association to Meet.

The ninth annual convention of the Southwest Water-Works Association will be held at New Orleans, La., September 20 to 23, inclusive. The St. Charles Hotel will be official headquarters. At present the association embraces the following States: Nebraska, Kansas, Texas, Arkansas, Mississippi, Missouri, Oklahoma, New Mexico, Louisiana, Alabama. Other States will probably be taken in at the New Orleans convention.

For Manufacturing Oils at Bogalusa.

Essential oils will be manufactured from stumps and light woods at Bogalusa, La., by the Essential Oils Co. of Philadelphia. This company will build a plant reported to cost \$1,000,000, and it has already contracted with the Great Southern Lumber Co. for cuttings from its mills.

Coal Production, Movement and Stocks Held by Railroads.

The order terminating the daymen's strike in Illinois and Indiana did not reach the men in time to effect a general resumption of work on Monday, August 2, and consequently production of soft coal during the week of the 7th, as reported by the United States Geological Survey, was still below normal. The total output, including lignite and coal made into coke, is estimated at 10,334,000 net tons, a figure smaller by 546,000 tons than that of the week before the strike.

The effects of the lag in resuming operations appears in the records of daily loadings. On Monday, August 2, they were but 80 per cent of the average before the strike, but by Thursday and Friday they had passed the pre-strike average.

Production during the first 187 working days of the last four years has been as follows (in net tons):

1917.....	331,311,000	1919.....	267,578,000
1918.....	351,149,000	1920.....	313,069,000

The year 1920 is thus 18,250,000 tons behind 1917, and more than 38,000,000 tons behind 1918, but is 45,500,000 tons ahead of 1919.

Cars of anthracite loaded by the principal carriers during the week ended August 7 numbered 34,214. This indicates a total output, including mine fuel and sales to local trade, of 1,757,000 net tons. This was a decrease of 103,000 tons below that of the preceding week and of 113,000 tons, or 6 per cent, when compared with the corresponding week of 1919.

The production of beehive coke during the week ended August 7 reached the highest point attained since the latter part of June. Estimates based upon shipments originating on the principal coke-carrying roads place the total output at 409,000 net tons, an increase over the preceding week of 14,000 tons, or 3.6 per cent. The increase centered in the Connellsville region, where production, as reported by the Connellsville Courier, rose from 172,870 to 194,140 tons.

Dumpings at Lake Erie ports increased 57,383 tons during the second week of operation of the amended Lake order (Service Order No. 10). The total for the week ended August 7 was 832,701 net tons, of which 795,969 tons were cargo coal and 36,732 vessel fuel. This was the largest tonnage handled in any week this season, but was still far short of the maximum performance in earlier years. Dumpings in the corresponding week of 1918, for example, were 1,025,000 tons.

The cumulative lake movement since the opening of navigation now stands at 7,647,000 tons, as against 13,190,000 in 1918 and 14,375,000 in 1919.

The year 1920 is thus about 5,500,000 tons behind 1918 and 6,750,000 behind 1919.

The figures of dumpings at ports given above are perhaps less fair as a test of the effectiveness of Service Order No. 10 than are the reports of cars leaving the mines for Lake destinations, because the order did not go into force until July 26, and a certain time had to elapse before coal shipped under it could reach the Lakes. Reports to the American Railroad Association indicate the following situation at the end of the first and second weeks' operation of the order:

Short at end of first week (July 31).....	4,546 cars
Short at end of second week (August 7).....	8,232 cars

As the initial assessments under the order totaled 3840 cars per day, the movement may be said to have been about 1.2 days in arrears at the end of the first week and 2.1 days in arrears at the end of the second week.

Shipments on August 9 exceeded the daily quota.

Tidewater shipments continued in great volume during the first week of August. The total dumpings at the four North Atlantic ports and Charleston, according to reports furnished the Geological Survey by the American Railroad Association, were 27,464 cars, almost exactly the same as those of the preceding week, and 3844 cars greater than the July average.

There was a decrease in the movement to Hampton Roads, but an increase at the four other ports.

The steady increase in the dumpings at New York, which has been apparent since June, culminated in a total of 8925 cars. Philadelphia and Baltimore also attained the highest mark of recent weeks.

CARS OF BITUMINOUS COAL DUMPED WEEKLY OVER TIDEWATER PERS AT THE FOUR NORTH ATLANTIC PORTS AND CHARLESTON.*

Week ended.	New York.	Phila- delphia.	Baltimore.	Hampton Roads.	Charleston.	Total.
July 24....	8,424	3,456	3,683	9,601	526	25,690
July 31....	8,685	4,211	3,975	10,512	118	27,464
Aug. 7....	8,925	4,291	4,580	9,394	274	27,464

*Furnished by courtesy of American Railroad Association. Includes coal destined for bunker, for New England or other coastwise and local use and for export.

Statistics supplied the Geological Survey by the Tidewater Bituminous Coal Statistical Bureau show that during the first week of August the movement to New England reached 256,000 net tons, while exports were 490,000 net tons. This was at a monthly rate of 1,100,000 tons to New England and 2,000,000 tons for export. In June, the latest month for which complete figures are available, the New England movement was 772,000 tons and the exports 2,175,000 tons. The first week of operation of Service Order No. 11 thus saw a slight reduction in exports and a decided increase in the tonnage to New England. The latter, however, was still somewhat short of the goal of 1,250,000 net tons per month fixed by the order. By ports, the week's performance was as follows:

TIDEWATER BITUMINOUS COAL SHIPMENTS THE FIRST WEEK OF AUGUST, 1920, BY PORTS. (In Net Tons.)

Destination.	New York.	Phila- delphia.	Baltimore.	Hampton Roads.	Total dumped.
New England....	96,000	9,000	26,000	125,000	256,000
Exports.....	.....	43,000	100,000	287,000	490,000
Bunker.....	.....	18,000	27,000	80,000	195,000
Inside capes....	.....	45,000	26,000	9,000	80,000
Other tonnage....	168,000	.....	.....	10,000	178,000
Total.....	336,000	115,000	239,000	511,000	1,201,000

Charleston made no report.

The foregoing figures, however, represent coal dumped at the ports rather than coal loaded at the mines for transshipment to New England via tide. Light on the movement from the mines is thrown by the following statement furnished by the American Railroad Association, summarizing the situation at the end of the first week's operation of the order: Short at end of first week (August 7) 1588 cars.

The total initial allotment for New England under the order was 923 cars per day. The movement may thus be said to have been about 1.7 days in arrears at the end of the second week.

The rail movement of bituminous coal to New England increased again during the week ended August 7. Reports furnished the Geological Survey by the American Railroad Association place the number of cars forwarded to New England destination through the five Hudson River gateways of the Harlem River, Maybrook, Albany, Rotterdam and Mechanicsville at 6732. With the single exception of the week of July 24, when 7033 cars were forwarded, this was the largest of the present year. It was 2089 cars, or 45 per cent, greater than the corresponding week of 1919.

The railroads consume 28 per cent of the soft coal mined, and normally hold about the same proportion of the total quantity of coal in storage. Data on railroad-fuel stocks from July 1, 1916, to January 1, 1919, are given in the following table:

STOCKS OF BITUMINOUS COAL HELD BY RAILROADS FOR FUEL, EXCLUDING COAL IN TRANSIT.*

Date.	Eastern District.	Western District.	Southern District.	Total.
July 1, 1916.....	6,115,000	2,246,000	824,000	9,185,000
January 1, 1917.....	3,981,749	2,234,345	427,388	6,643,482
July 1, 1917.....	3,622,000	3,068,000	486,000	7,176,000
January 1, 1918.....	4,751,193	3,960,269	878,789	9,590,251
July 1, 1918.....	3,797,000	4,849,000	1,310,000	9,956,000
January 1, 1919.....	4,736,693	7,111,268	1,796,741	13,644,702

*Complete data on railroad fuel stocks are available for January 1 of the years 1917, 1918 and 1919. For the other dates, the figures given are estimates of the total based on actual reports from roads normally carrying over 90 per cent of the stocks.

It will be seen that stocks of railroad fuel ranged during the two and a half years covered by the table from a minimum of 6,643,000 tons to a maximum of 13,644,000 tons at the beginning of 1919.

In comparison with these figures the stocks held by the railroads in the first half of 1920 were small. Data furnished the Geological Survey by the American Railroad Association indicate that 124 of the principal carriers had on hand on February 20, 1920, in cars and in stock piles, 4,275,348 net tons of coal, and that on May 31 their holdings had decreased to 3,411,348 tons. The questionnaire used in obtaining these statistics asked specifically for

"tons in cars" and "tons in stock piles." Many roads furnished also the tons in chutes, and it is probable that others included the quantity in chutes under the caption "tons in cars." As not all of the quantity in chutes was obtained, however, the figures are somewhat short of the total amount of fuel coal held by the railroads. Allowing for the small roads not reporting, the results of the inquiry may be summarized as follows:

STOCKS OF BITUMINOUS COAL HELD BY RAILROADS FOR FUEL IN CARS AND IN STOCK PILES, FEBRUARY 29, AND JUNE 1, 1920.

Date.	-Net tons-			Total.
	Eastern District.	Western District.	Southern District.	
February 29, 1920.....	2,290,000	1,880,000	614,000	4,844,000
June 1, 1920.....	1,461,000	1,840,000	443,000	3,744,000

These figures, although not strictly comparable with the data for previous years, indicate clearly that railroad-fuel stocks on February 29, 1920, were far below those of the years immediately preceding. Yet from February 29 to June 1, 1920, largely as a result of the switchmen's strike, the stocks continued to decline. The decrease has been most pronounced in the Eastern District. While stocks are low in the Southern District, they are still about as high as they were from January 1 to July 1, 1917. In the Western District also they are not far below the level of July, 1916, and January, 1917. Furthermore, stocks in the Western District decreased but little from March 1 to June 1, 1920.

Like other Eastern carriers, the New England roads reported stocks far below their customary holdings in the last four years. On February 29, 1920, they had on hand in cars and in stock piles 365,000 tons, sufficient on the average for about three weeks and two days' operation. Between February 29 and June 1 their stocks declined 30 per cent, reaching on the latter date 254,000 tons, or about two weeks and three days' supply.

Depleted stocks of railroad fuel are particularly significant to the general consumer because they point to the probability that the railroads will have to confiscate coal or assign cars freely, measures which necessarily interfere with the regular deliveries of coal to other users.

Extensive Geological Tests Presage Further Great Developments in Tampico District.

Tampico, Mexico, August 4—[Special.]—Now that it is comparatively safe to travel about in the rural districts of the Gulf coast region of Mexico, many field geologists representing various oil interests are investigating the structure of different localities with a view to determining their petroleum possibilities. Within the last few weeks more than 100 geological expeditions of this kind have gone out from Tampico. They are scattered through the lower Gulf coast region all the way from Tampico to the Isthmus of Tehuantepec. Geological surveys are also being made of the territory between Tampico and Matamoros, near the mouth of the Rio Grande.

The oil rights to large areas of land have been leased by American and British interests recently, and there promises to be an enormous amount of wildcatting done as soon as drilling equipment may be had. It is stated that in the wildcat district of Zacamixtle there is being spent at this time approximately \$8,000,000 American money in drilling operations. This exploration work is being conducted solely on the strength of the favorable reports of geologists and in face of the fact that there has been, up to this time, no producing well brought in there. At the present rate of activity in the matter of acquiring leases practically all of the land along the Gulf coast for a distance of 800 miles or more, and extending into the interior for 50 miles, will be taken up within the next several months. The owners of these lands are demanding and receiving much higher prices for their leases than was the case in the early stages of oil-development operations in the Tampico territory.

It is asserted that no oil district in the world equals that of Tampico in the matter of expansion of the various phases of the industry that is now going on. All of the companies are constantly adding to their working forces, and it is conservatively estimated that the daily payroll of these concerns now aggregates more than \$200,000 United States currency. In addition to the placing in circulation of this big sum of money, the different companies are spending many millions more in the purchase of material and supplies and the construction of improvements.

The Texas Company Brings in a Wonderful Well—Now Producing Wealth at Rate of \$90,000 a Day.

West Columbia, Tex., August 13—[Special.]—Wealth to the amount of approximately \$90,000 a day is flowing from the mouth of the well of the Texas Company near here. This phenomenal well came in on July 20 with a daily measured flow of 20,000 barrels. Gradually the production has mounted up until it is now a little in excess of 30,000 barrels a day. The crude produce has a cash value of \$3 a barrel. One of the important features of this wonderful well is that not a barrel of oil has been wasted. Close at hand, when the pay-sand was struck at a depth of 2785 feet, were earthen and steel storage tanks, with pipe-line outlet. The throbbing monster was turned into these receptacles, and day and night the fluid has poured forth through the hole that is still partly filled with the drilling tools. No time was had to remove the drill, so quickly did the volume of oil shoot forth. It is expected that when the well is cleaned out the production will show a large increase, and experts say it will not be surprising if it goes to 50,000 barrels a day.

From a revenue-producing standpoint, this well is the largest ever brought in in Texas. Some of the early wells at Spindle-Top, 20 years ago, had a daily output of 75,000 to 80,000, but in those days the crude product sold for as low as three cents a barrel. In order that there may be no cessation of the flow of the new well when the storage tanks are filled, the work of constructing pipe lines into which the output may be turned is being rushed.

Not only is the production of this well adding enormously to the assets of the Texas Company, but it is piling up a big fortune for W. H. Abrams, the farmer who owns the land. Mr. Abrams leased to the Texas Company his plantation of 1650 acres. He receives a royalty of one-eighth of all oil that may be produced. This first well is bringing him a daily income of nearly \$12,000, or at the rate of \$4,380,000 a year. It is the theory of oil men here that the well will be of long life, probably keeping up its present production for several years. If this be true, the Texas Company stands to receive an annual revenue of close to \$30,000,000 from it, not counting the production that it may obtain in many other wells that it plans to drill upon its big lease acreage.

As a producer of dollars this well exceeds any business proposition for the amount of money invested in the United States. It paid for itself the first few hours of flow.

It was contrary to the advice of oil geologists that the well was drilled more than a mile from the proved pool of West Columbia. It was a wildcat in the strictest sense of the word. The success of the venture only goes to prove that "oil is where you find it," say the men who do not take much stock in the so-called science of the industry. How much area the new pool covers is a matter yet to be determined. All of the larger companies operating in the heavy crude fields of the Gulf coast region are making strenuous efforts to get leases as close to the well as possible. Several of these concerns have been successful in securing leases on small tracts of land, ranging from 5 to 20 acres. But it is the Texas Company that owns the cream of the land in what promises to be one of the greatest producing fields in the world.

Spasmodic efforts have been made for the last 20 years to develop big oil production at West Columbia. Several wells of 3000 to 6000 barrels daily capacity have been brought in here. It is interesting to note that Will Hogg of Houston, son of the late Governor James S. Hogg, has made an enormous fortune out of the West Columbia and Humble fields. He owns leases situated close to the new well of the Texas Company, and stands a fine show to make many more millions of dollars. He is also a large stockholder in the Texas Company. It was Governor Hogg who waged a relentless fight upon the capitalistic element, as he termed men of wealth and big corporations.

Upon the threshold of the apple-shipping season, it is estimated that there will be shipped from the Eastern Panhandle and from the Valley of Virginia in part a total of about 1,500,000 barrels of apples during the present season. Included in the territory from which such a large crop will be shipped are the Cumberland region, the Potomac Valley region, and what is known as the Apple Pie region.

Preparations Made for Western Oklahoma's Most Extensive Drilling Campaign.

Oklahoma City, Okla., August 13—[Special.]—The tendency is toward strengthened organizations, concentration of effort and finances arranged for in advance in the fall drilling campaign that is to cover all fields of Western Oklahoma and possible extensions. The money situation hindered many small but legitimate concerns of this region. Tight money was the forerunner of the end of lease-buying by major concerns, which caused the suspension of drilling of many wildcats and affected operations in proven territory. It enforced vacations and idleness in lease and contracting departments. Political campaigns also had a depressing effect.

New prospective territory in several spots will get attention early in the autumn. Important among these are the new pool at Maramec, the gas region of the eastern part of Grant county, and that of the southwestern part of Garvin county, both of which were identified during the summer; possible extension of 1600 to 1800-foot sands in the western half of Stephens county, the shallow district of the eastern half of that county; possible connections of the Cement and Stephens county pools; extension of the lately found gas area of Lincoln county; further explorations in the shallow district of Murray county, and extensions and deeper drilling in and around the shallow pools at Francis and Allen, and further proving of the ever-widening area of the Hewitt pool, in Carter county.

No drilling campaign in the history of the western district has been of such magnitude. It extends clear across the Panhandle of Oklahoma. In Cimarron county major companies are backing a test by Jack Harris on State school land. This is in a region made interesting lately by the discovery of a gas sand making upwards of 10,000,000 cubic feet near Liberal, Kans., just over the Oklahoma line. The Liberal discovery and that in Grant county has caused a string of locations to be made in a northwest trend over several counties.

Osage and Okmulgee counties continue their gusher records, the former in the proving of extensions of territory and the latter in proving deeper sands over condemned areas. Next in importance to these activities in the central and north central areas of the State are tests for deeper sands in the producing districts of Creek, Pawnee, Payne and Tulsa counties. The deep-test campaign of that region has become as interesting as the wildcatting campaign over the western part of the State.

Lease surrenders in Western Oklahoma are reported to have been comparatively few this summer. In that connection it is an interesting fact that the Magnolia Petroleum Co., the Pierce Oil Corporation, the Empire Gas & Fuel Co. and the Lone Star Gas Co. joined smaller organizations in wildcatting in several counties of the west side. The Magnolia has drilled to 3600 feet in Beckham county, near the Texas line, and is reported to have abandoned the hole.

The Lone Star Gas Co. is strengthening its hold in counties of the south and southwest, in view of gas discoveries and the company's gas contracts in North Texas. Its pipe lines are now scattered over Carter, Stephens, Caddo, Cotton, Garvin and Comanche counties. The gas supply in that section is reported to have materially increased during the summer, particularly in Stephens and Cotton counties. Of equal importance to the supply in these counties is that developing in Garvin and the eastern part of Stephens.

The Emerald Oil Co., the Invincible Oil Corporation, the Magnolia Petroleum Co. and the Lone Star Gas Co. are taking an important part in drilling outside locations in the Cement district and also deeper tests. It appears a shallow pool of consequence has been discovered near Elgin, in Comanche county. In this district the Humble Oil & Refining Co. is drilling and the Emerald has blocked acreage for a test. Between Lawton and Duncan the Gladys Belle Oil Co. of Tulsa has bought the leases and a well of the Evans Petroleum Co. and is to further experiment with a new sand found at about 1400 feet by the Evans company. The Lawton shallow field has been extended and the production increased virtually enough to warrant the Lawton Refining Co. in laying pipe line to the field from its plant at Lawton.

The entire north half of Carter county is being exploited, and half a dozen shallow oil and gas pools have been found. The explorations run north, northwest and northeast of the Healdton and

Hewitt pools and east and northeast of the Fox pool. They connect with the new district at Robberson, in Garvin county, which major companies will take a lead in developing during the next few months.

Among interesting tests in the early part of August was that of the Idaho Drilling Syndicate in Oklahoma county, near Edmond. At about 1900 feet a sand bearing oil and gas was entered. Geologists were divided in opinion. Generally speaking, they thought the test should go at least 100 feet deeper. Trouble was encountered in setting the casing. It leaked, and baling and swabbing were in progress to clean the hole for a test. The location is on the highest point on an air line between Kansas City and the Gulf of Mexico.

It appears that the Amerada Petroleum Corporation of New York, a branch of an English syndicate backed by English capitalists, took advantage of the laxity of business during the summer in this section of the Mid-Continent district to get a foothold in Oklahoma. Records in several counties show that leases near production and out in wildcat areas were obtained by this company. Word spread among oil men that the company's representative in Oklahoma City had come to the State with free rein in the matter of buying leases and producing properties.

Showing of Oil in Northeastern Louisiana Fields Brings Big Demand for Leases.

Monroe, La., August 14—[Special.]—As a result of a good showing of oil at three different deep-test wells in Lincoln, Union and Morehouse parishes, there has been during the past week more than an ordinary rush of oil men to the Northeastern Louisiana fields, with the resultant feverish activity to obtain leases for big operating companies in the vicinity of the wells where oil in paying quantities is indicated.

Louisiana oil men are interested particularly in the operations of the Empire Gas & Fuel Co. of Bartlesville, Okla.; at Griffin No. 1 well, in Lincoln parish, and those of the Transcontinental Oil & Gas Co. of Pittsburgh, on the D. F. Reddon farm, in Union parish. Large numbers of prospectors are invading also Jones, near which Ridge and McLaughlin are believed to have struck oil at Zachary No. 1 well.

These indications of oil and the fact that many of the fifty or more "wildcat" wells in the Northeastern Louisiana fields are reaching a depth that means either the discovery of oil or the abandonment of the quest as far as these wells are concerned, are the cause of a feeling of tension among members of the oil and gas fraternity throughout the Northeastern Louisiana fields.

Approximately \$15,000,000 has been expended in the Northeastern Louisiana fields, largely in Ouachita parish, since January 1 for the purpose of uncovering the "mother pool" in one of the most important campaigns for oil in "wildcat" territory ever undertaken in unproven fields of the South. The results of this far-reaching effort are coming to a final test now, say oil men, and much depends on the results of operations at many of the wells now down to oil depths. Even if oil is not found after drilling the 50 pioneer wells, representatives of some of the largest companies say that the campaign will not be abandoned, but will be continued during the next 12 months. There are, in fact, many evidences of additional campaigns of this kind on the western side of Ouachita parish, where in the last two months 10 or 15 new wells have started, and in Morehouse parish, where at least 30 new wells are being drilled or have been located preparatory for early drilling.

The showing of oil at the well of the Empire Gas & Fuel Co. in Lincoln parish has started a stampede for leases in that neighborhood. The well is located on the farm of W. E. Hammons, and is down to a depth of 2960 feet.

The six-inch casing of Griffin No. 1 well has been set, and a test will be made by the first of next week.

Orders have also been given by the Transcontinental company to the drillers to set the six-inch casing at 2950 feet, and after the six-inch has been set a test will be made. The results of this well will be known next week, as is also expected of the Ridge and McLaughlin well in Morehouse parish. The results of the three wells, which experts believe will produce oil in paying quantities, are being awaited with interest not only in the Northeastern Louisiana fields, but throughout the State, especially among oil and gas men.

Are Southern Shipping Lines Endangered?

Washington, D. C., August 17—[Special.]—The United States Shipping Board, by Admiral Benson, chairman, has announced a new ship sales policy covering various types of vessels owned by the Government. Until it has been ascertained exactly what boats are to be included in the offerings, companies that have been formed to operate steamship lines from Southern ports will be unable to gauge the significance of this move. It is declared that none of the Southern companies will be in position to purchase ships for the next three to five years, and that should the vessels these companies now operate be included in the offerings by the Shipping Board, the result would be the destruction of the newly formed and not yet fully developed merchant marine service of all Southern ports. Thus all the efforts to secure favorable railroad freight rates to and from Southern ports and to divert commerce—export and import—from the overcrowded ports of the North Atlantic seaboard to the South Atlantic and Gulf ports would come to naught.

The situation is so full of unfavorable possibilities that thorough investigation as to the exact meaning of the new policy will be undertaken at once by Southern and Western interests.

Promising Oil Wells in South-Central Arkansas—Wells Now Drilling May Open New Pools.

"For the last few years geologists have conceded that oil and gas may be found in commercial quantities in Southern Arkansas," says a bulletin of the United States Geological Survey. "The formations there are practically identical with those that yield oil and gas in Northern Louisiana, and the location of the area with relation to the Ouachita and Sabine uplifts indicates that there is in that area favorable anticlinal structure comparable to the anticlines beneath which the Caddo and Homer pools were formed. Development was retarded, however, by lack of detailed mapping, which would have shown the relations of the beds of Southern Arkansas to those of Louisiana, for it seemed possible that a fault, known as the Alabama Landing fault, which had been observed in Northeastern Louisiana, extended across Southern Arkansas, and that the beds north of this fault had dropped down so far that the oil-bearing beds would be below the reach of the drill. Recent developments have shown that this fear is groundless, and there is now ample encouragement for active wildcatting in this region. The beds are of the same age as those that bear oil only a short distance to the south; the structural relations indicate that anticlines and domes should exist, and most important of all, tests have actually discovered good showings of oil and have developed gas in paying volume.

"One of the first encouraging indications of the presence of oil-bearing beds in Southern Arkansas was a flow of gas in a well in Sevier county, near the town of De Queen, in 1918. This well was reported to have a capacity of 7,000,000 cubic feet a day, but either the report was an exaggeration or difficulties arose in drilling, for the well was abandoned. No further large strike occurred until the spring of 1920, when several wells were reported to have afforded showings of oil and gas, and one, the Constantine Refining Co.'s well, about four miles southwest of the town of El Dorado, obtained a flow of gas variously estimated at 10,000,000 to 100,000,000 cubic feet a day, and a spray of oil amounting to 5 or 10 barrels a day. This strike, together with the promising showings from other wells in the same general district, has centered attention on Union, Columbia and Ouachita counties, though Lafayette, Nevada, Bradley and Ashley counties are also regarded as containing favorable areas. Union, Columbia and Ouachita counties are traversed by the Missouri Pacific and the Chicago, Rock Island & Pacific railroads, and the drilling sites may be reached by automobile from El Dorado, the county-seat of Ouachita county, and Magnolia, the county-seat of Columbia county, as well as from several small intermediate stations."

Progress of Education in Mississippi.

Memphis, Tenn., August 2—[Special.]—The State of Mississippi has made a 22 per cent gain since 1917 in the number of counties having consolidated school systems, according to figures just compiled under direction of J. T. Calhoun, State Rural School Supervisor. The same report shows that 98 teachers' homes have been built in the State as one means of meeting a shortage in teaching forces. Other figures throw interesting light on the fine progress the State is making in an educational way. These, in tabulated form, include the following:

	1917.	1920.	P. ct.
Number of counties having consolidation.....	64	78	22
Number of consolidated schools.....	299	470	62
Number of teachers in consolidated schools.....	977	2,949	108
Number of wagons and auto trucks for children..	725	1,539	112
Number of pupils transported.....	14,643	39,772	110
Enrollment	33,037	61,821	87
Monthly transportation cost.....	\$99,447	...	...
Cost per pupil per month.....	...	3.13	...
Number of teachers' homes in consolidated districts .....	...	98	...

Among counties that have completed the work of consolidating schools are Warren, Pearl River, Tate, Copiah, Lauderdale, Forrest, Harrison, Bolivar, Washington, Madison, Stone, Perry and George. Other counties have half their districts consolidated. Most consolidated districts have built fine school buildings, and now have good teaching forces.

Farm Lands Offered for Sale as Result of Acute Labor Shortage.

Elkins, W. Va., August 14—[Special.]—The acute shortage of labor has led many West Virginia farmers to offer their farms for sale. The shortage is attributed to the high wages paid in the mines, mills and factories of the State, there being few young men left on the farms, as a matter of fact, as a result of such conditions. A concrete example of what is going on was furnished last week in Preston county, where it is said that on one day half a dozen farmers were at the county-seat trying to dispose of their farms. In this county and elsewhere farm hands are asking wages of \$4.50 a day, and it is found impossible to secure sufficient laborers even at that rate of pay.

Textile Finishing Plant Addition.

Facilities at the plant of the Yadkin Finishing Co., Salisbury, N. C., will be increased by the erection of an additional building to be equipped with new machinery for finishing textile products. This new building will be of standard mill construction, 100 feet long by 50 feet wide, with sprinkler and heating systems. The Yadkin corporation is also having changes and additions made in its present equipment. J. E. Sirrine & Co., Greenville, S. C., are the architects and engineers.

For Building Cotton Waste Plant.

An 80x30-foot two-story reinforced concrete building, equipped with sprinkler and heating systems, will be erected by the Sherman (Tex.) Manufacturing Co. This structure will be equipped for storing and working cotton waste. Plans and specifications are being prepared by J. E. Sirrine & Co., architects and engineers, Greenville, S. C.

Georgia Wants Bridge Engineer.

The State of Georgia wants an experienced engineer for its Highway Department, to have entire charge of bridge design and construction. Correspondence is invited by W. R. Neel, State Highway Engineer, Walton Building, Atlanta.

West Virginia poultry products had a value in 1910 of about \$6,000,000, according to figures compiled by Miss Hazel Horsfall, home demonstration agent, Charleston, W. Va., and it is believed that they have now a value at least twice as large, or in the neighborhood of \$11,000,000 or \$12,000,000. It is computed that the average West Virginia hen, however, lays only about 50 eggs a year, or an average of less than one a week.

NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

Advantages of Southern Shales Over Western Deposits.

LUCIUS P. BROWN, Franklin, Tenn.

In your number of July 22 are some news notes and an editorial on the possibilities of oil shales and their distillation, in which stress is laid on the possibilities of the Western shale deposits.

It seems to me that hardly enough attention is paid by you in this number to the possibilities of the Southern deposits of shale, particularly as a news item mentions that shales from Arkansas are being tested at St. Louis.

The "Chattanooga shale" of the geologists, a heavy-bedded, highly organic formation, extends from Pennsylvania to Oklahoma, underlying a large portion of all the States between, of varying thickness, but nowhere that I know of so thin as some of the worked Scotch seams.

Reliable testing has shown yields of oil better than the Scotch shales, and the same is true of the yield of sulphate of ammonia. It must be remembered that it is only the latter material which has enabled the Scotch operators to withstand the competition of crude petroleum.

It is obvious that shales situated as are those in the South can be worked much more economically, because of their nearness to supplies of labor and material, than can Western shales, and this advantage is one that cannot be too strongly stressed. But in addition they are closer to consuming points, and particularly to the greatest consuming district for fertilizers in the United States, which will take all the ammonium salts that the industry could produce.

The possibilities of these rocks justify more attention from the industrial press and from capital than they appear to have up to this time received.

Holds That Sabbath and Sunday Are Entirely Different.

GEO. A. MAIN, Daytona, Fla.

I have long been an interested reader of the MANUFACTURERS RECORD. The recent editorial, "Remember," prompts some comments which, in the light of your rational and courageous position on many other subjects, will, I believe, be of interest.

In this editorial I believe you intend to convey the thought that the Book "once highly esteemed as a final authority" still is and must forever remain our final authority. I presume this, and concur therein. I take it also for granted that the political conference referred to was held on Sunday, to which day the editorial refers as the "Sabbath."

I seek no religious controversy, and yet, to assume Sunday the same as the Sabbath, to apply scriptural texts to the first day, Sunday, which were never intended to be applied to any day but the seventh-day Sabbath, and to imply that they who disregard the Sunday are among the wicked, is to assist in the perpetuation of an error of such magnitude and importance that I cannot help feeling that comments thereon will be kindly received and be of interest.

The Christ's single caution to the Disciples that their "flight be not on the Sabbath," looking ahead as it does many years after the resurrection, forever refutes the assertion that it was His intention that the day be changed. Scripture is wholly without evidence that Sunday was ever called the Sabbath or that it was ever kept as the Sabbath.

There must always remain a "disregarded Sabbath" (?) as long as we attempt to bring the Sabbath idea into Sunday—a thing as impossible as the loyal celebration of Independence Day on any other than July 4. I trust that you will pardon my assertiveness but I cannot escape the conviction that you, more, perhaps, than any other American, have it within your power to lead the world back to the true Sabbath, and thence to right Sabbath regard.

The Only Sure Road to National Safety.

W. M. WEST, 1365 Beach Street, Indianapolis, Ind.

As I have been in the past, so I am yet with you in your noble efforts to lead the people into a more safe and sane way of living, and to improve their ways in the future by seeing some of their follies in the past few years. God knows there have been some sad blunders made. You have had courage enough to forewarn the people of many, and are still warning them of dangers ahead, yet they go blindly on. You forewarned them in 1916 of the danger of selling this Government out to the Railroad Brotherhoods, and yet the act was perpetrated. You and I will hardly live to see the evil results overcome. Not only that one, but there were other demoralizing acts that will take time to blot out, if ever done. We may yet outlive them, but we are weakened by such things, and our history will be blurred forever by such errors. But, thank God, there is one thing that has not been written into our records yet, and that is the document called the League of Nations, and all praise to you for the valiant fight you have put up against it, and may you and your coworkers put up such a fight against it that its adherents will be ashamed to espouse it any longer. Some have dared to quote Scripture to prove their grounds, but the League of Nations is not of God, neither is it according to Bible teachings, but to the contrary, as the Bible will bear out. We cannot legislate peace, neither can we legislate people into goodness or into the Kingdom of Heaven, but we can legislate this country to the bad by man-made laws, and so far forgetting God that He will leave us to our own mercy and mock at our efforts.

I am a firm believer in God as the Divine Ruler, and that He will care for His people so long as they do His will, and I believe today if we, as a nation, would return to God and make our peace with Him, that our affairs would work out harmoniously and that this would be a blessed land where peace and contentment would prevail instead of strife and turmoil.

Until we can get such men in power as will recognize God and His teachings, we cannot expect the right kind of government. I have been hoping and praying that God would raise up one equal to the occasion, and since reading Harding's speech of acceptance I have wondered if the right kind of influence was thrown about him if he would not be our best choice. I like the tone of his speech; he doesn't seem to be that big IT, regardless of God and all creation. He seems to realize that there are others in this country. The slogan that Cox and his followers are putting up is sickening to start with; Peace and Progressiveness! We haven't gotten over that peace cry we heard so much four years ago. It is hypocritical to start with.

Garage, Bank and Public Service Companies Wanted.

JNO. B. PERRINE, President Valparaiso Development Co.,
Valparaiso, Fla.

The notice which you published on July 29 has brought us scores of replies, and I believe you have solved some of our serious problems for us.

We have closed one contract for clearing 1000 acres of land, to be done by February 1, and to guarantee faithful performance they have put up a \$1000 bond. We saved on this one deal over our present costs over \$60,000. Several more deals are on the fire, and at least two of them will be closed and will benefit us greatly.

Now, I am very grateful to you, and will do anything in my power to further the interests of the MANUFACTURERS RECORD.

We still have a garage business, a bank and trust company, a transportation company, water, telephone and electric-light company to find parents.

THE IRON AND STEEL SITUATION

Iron and Steel Market Dull, But Car Supply Shows Improvement—Pig-Iron Scarce—Coke Expected to Decline.

Pittsburgh, Pa., August 16.—[Special.]—While all branches of the iron and steel and related markets, such as coke, are very dull in point of actual tonnage turnover, the week has been productive of interesting and somewhat puzzling developments marketwise. To illustrate the puzzling character of the news, among the week's developments were the following: A decline of \$5 a ton in sheet bars, a large increase in Connellsville coke production, and sales of pig-iron at prices several dollars a ton above what had been generally recognized as the market level. As sheet bars are made from pig-iron, the market generally is not in a very clear position when sheet bars decline and pig-iron shows a disposition to advance, while again the talk of higher prices for pig-iron has been based in considerable part upon the shortage in coke, and now coke is in much better supply.

Monday, August 2, witnessed a larger supply of coke cars in the Connellsville region than any Monday for a long time, although Monday's supplies are always above the average, since the railroads have an extra day. The better supplies continued through the week, and now the Connellsville Courier reports the week's production of coke at 194,140 tons, which is 21,270 tons more than production in the preceding week and about 5000 tons above the best production that had been reported since the middle of April, when the rail troubles cut down production so much.

Last week's car supplies showed a further improvement, estimated in some quarters at as much as 10 per cent. The increased placement is due to better car movement, of course, not to more cars in service. Right along there has been an ample number of cars in the service, the difficulty being that they did not move at anything like normal rate. One furnace after another reported having to keep two or two and a half times as much coke en route as is normally required in order that daily deliveries would average up to requirements. Of course, those cars were rendering less than 50 per cent of normal efficiency, and if more cars had been put into the service the congestion would have been increased, resulting in still less coke being moved. In the past couple days some valley furnaces have reported receiving coke three days after it was shipped, when the same furnaces recently had coke on the way for a couple weeks or longer.

Up to the time of this writing the coke market has not broken, but expectations are quite general that it will break, the market being quotable generally at about \$18 for furnace coke and \$19 to \$20 for foundry coke per net ton at ovens. One sanguine furnaceman predicts that coke will be down to \$15 by the end of the week. He does not belong to the group of furnacemen who have been seeking higher prices for pig-iron on the ground, partly, of coke being so high-priced, but belongs to the class who hold that if the pig iron market is kept on an even keel it will last, while if it pushed up too high it will drop all the farther.

Over a week ago, when the basic pig-iron market had been regarded as well established at \$46.50, valley, a sale of a good-sized tonnage was reported at \$48.50, and in some quarters the new sale was regarded as establishing the market at an advance of \$2. The reputed buyer is reported to have denied buying pig-iron at any price. Up to this writing no other transactions in basic iron are reported, at least authentically, and opinion is divided as to whether "the market" is \$46.50 or \$48.50. Possibly one sale would establish the market at an advance, but it would have to be very well authenticated and entirely free from "strings" or special conditions. The market would hardly advance unless active, but it cannot be considered active when so long an interval has occurred without further sales.

In foundry iron there are also complications. For several weeks conservative foundry iron furnaces regarded the market as \$46, valley, while two interests at least insisted that iron was going to \$50 and they would make no further sales until they secured that figure. One of these interests has now reached the mark, even overshooting it, having sold 500 tons of No. 2 foundry for delivery over the remainder of the year to a New England consumer at \$51 f. o. b. furnace. On account of differences in freight rates, this would be equal to about \$50.50, valley. The transaction is very important marketwise, but it does not establish a market price on foundry iron, since the brand involved is a well-

known one, and a consumer often is willing to pay an extra price to get a brand to which the workmen are accustomed. If the purchasing agent changes the brand of pig-iron or coke, everything that goes wrong in the foundry is likely to be blamed on the change, and that does not pay.

Bessemer iron likewise presents vagaries. Several small sales are just reported at the old price of \$47, valley, while one seller claims to have secured \$50.

At the moment, therefore, it is difficult to say just what "the market" prices are, but it is perfectly clear that pig-iron is strong and advancing. It is still to be seen what effect will come from the decline in the coke market that is now expected. The furnacemen would lose one "talking point," but, after all, prices advance when sellers are able to advance them and "talking points" are not necessarily the governing element. The physical fact is that pig-iron is very scarce, and when an article is scarce it brings a high price, particularly when buyers have been cut loose from precedents as to what is a specially high price.

Softening in Sheet Bars.

The large amount of sheet bar tonnage that has accumulated at producing mills on account of the railroad situation is beginning to tell in the market, where a decline of \$5 a ton is now recorded. Sheet bars are much easier to pile than finished steel products, and when mills wished to continue their steel production and were taxed to store any more finished product they naturally piled some sheet bars. The deliveries have been very poor, and as a result the sheet and tin mills are not making further purchases, having much tonnage still due them, but sheet and tin plate consumers are correspondingly short of deliveries, and some have been making "conversion deals" in order to secure early deliveries. The sheet or tin plate consumer buys bars in the open market and makes an arrangement with a sheet or tin mill that would otherwise be idle to convert the sheet bars into the finished product. This gives work to a mill that would otherwise be idle. The principle is to pick out a steel mill that has open railroad communication with a mill that can accept the conversion contract. A fortnight ago a conversion deal was made involving the purchase of 3000 tons of sheet bars at \$75, this being the recognized market on such business. In the past 10 days several purchases for conversion purposes have been made, aggregating perhaps 5000 tons or more, not over \$70 being paid in any case, while at present six producing mills are counted up that will sell at that price, or have already done so.

Steel Production.

From the American Iron and Steel Institute report, showing the production of 30 companies which made 84 or 85 per cent of the total, it can be computed that the average rate of steel ingot production in July was about 39,900,000 gross tons per annum, this representing a decrease of 6 per cent from the June rate. The decrease could possibly be accounted for by the season of the year. Not to any extent has production of steel decreased by reason of the rail traffic situation, the effect of that having been to cause steel mills to leave more of their steel output in semi-finished form, to be finished later to customers' specifications when it is possible to make shipment. The mills are now shipping approximately as much finished steel as they produce, this being quite an improvement over conditions of a month or more ago. It appears that the steel works made slightly more pig-iron in July than in June, and as their steel production decreased they probably accumulated some pig-iron. Independence Day was a steel mill holiday, but not a blast furnace holiday.

Steel Corporation Business.

The Steel Corporation's unfilled tonnage report indicated that the Corporation booked 150,000 or 200,000 tons more business in July than in June, yet it is understood that the Corporation subsidiaries did not solicit any business, simply picking out, from business offered them, what they cared to accept. Such transactions, occurring in a very dull market, indicate the confidence buyers have in Steel Corporation prices. The independents have been selling no great tonnage, and in the main are not sold far ahead, yet they continue to quote prices much above the Steel Corporation's level. The increase in the Steel Corporation's unfilled obligations in July was 139,651 tons, this comparing with an increase of 38,351 tons in June, while the shipments were probably 50,000 or 100,000 tons heavier in the latter month.

Heavy Demand for Southern Iron—Deliveries Hampered by Car Shortage.

Birmingham, Ala., August 16—[Special.]—Pig-iron manufactured in the Birmingham district is wanted by consumers in all parts of the country, and orders are being placed on which delivery will be made through the first quarter of next year; in fact, on a little tonnage through the first half of 1921. The sales last week aggregated more than the production. Indications are that 1921 buying will open up good within 30 to 60 days. Spot iron is being sought in small lots, the consumers expressing a willingness to pay a premium for quick delivery. So far, there is no word intimating that the advance in freight rates, which will go into effect the latter part of this month, will affect the pig-iron market, the present prices to be held firm. On the contrary, it is believed a demand for more iron will be felt by reason of the railroads buying equipment, in the manufacture of which much iron and steel will go. The question of delivery at present is still a distressing subject in this section, the railroads not being able to furnish all the cars the furnace companies ask for, nor is there as prompt moving of the cars now being loaded as might be desired. It is believed that there will be some relief in the car situation when the new rates go into effect.

Pig-iron production in the South is being maintained. It is now estimated that the make in August will equal that of July, when Alabama reported the largest month's production in a long while—over 217,000 tons.

Sales during the past week ranged in orders from 100 to 3000 tons, and a considerable amount of the product was placed through St. Louis, Chicago and Cincinnati agencies, the Middle West, as well as up into Wisconsin and Minnesota, being anxious to get Alabama iron. The encouragement that was manifested a few weeks ago in the rail and water route to Massachusetts and New England is no longer apparent, there having been a clogged condition reached either at the port or before getting that far.

Pig-iron quotations in this district still hold the \$42 per ton basis, No. 2 foundry, 1.75 to 2.25 per cent silicon. A little tonnage has been sold here in the last few weeks, quick delivery at a premium of \$1 to \$5 per ton, but the regular quotation is given on the \$42 per ton basis. Sales of iron for delivery into next year have carried this price.

Home consumption shows no weakening. Cast-iron pipe works are troubled still with car shortage. Sanitary-pipe plants are still melting steadily and finding a good demand for their product, but unable to deliver promptly. The radiator plant is again in full operation, while the machine shops and foundries have plenty of orders on hand and more in sight. The Birmingham Machine & Foundry Co. is rushing work on two big central sugar mills—one for Central Vertientes, Camaguey, Cuba, and the other for Central San Christobal, Pinar Del Rio, Cuba—the two factories to be of the very latest design and most up-to-date plants in Cuba. The Ingalls Iron Works of Birmingham are working on the structural steel for the buildings for these mills, and announce that 200 cars will be necessary to transport the shapes to Cuba. Much of the sugar-machinery work is being done here, as well as cottonseed-crushing work. Engine building is also under way in this district in great quantity.

Steel mills in the Birmingham district are greatly perturbed by the railroad car shortage. It is impossible almost to deliver steel right in the district. The Birmingham Steel Corporation is unable to get all the steel it could use in its fabricating plant with the big steel works less than 10 miles away. The Gulf States Steel Co. the past week was offered a round-sum premium for certain steel shapes, and was unable to book the business because of inability to ship promptly. The fabricating steel plants all report plenty of work on hand, but inability to deliver is vexing. Cast-iron pipe plants have been able to ship a little of their product via water to the California coast, but this movement is but a small percentage that would be done if there were cars.

Representatives of Cuban agencies and machinery users were in the Birmingham district the past week and let it be known that there would be a splendid market in their country for some time to come. A big export business is anticipated by the iron and steel interests of this district, including those producing finished products.

Vice-President Alexander Hilton of the Frisco Railroad, in charge of traffic, will be in Birmingham this week to meet with the Birmingham Traffic Bureau, the Birmingham Chamber of

Commerce and other civic bodies to explain the plan of fixing the station of Cordova, on the Frisco, as the point of interchange with the Warrior River transportation facilities, instead of the port of Cordova, switching charges being intimated. The railroad has announced that there is no intent to injure Birmingham or the Warrior River project; that the plan suggested was in line with the general plan of interchange between two common carriers. Great apprehension was expressed here on the first announcement of the plan of fixing the point of interchange; that such a move would prove a dangerous precedent, as should other railroads take similar action it would, in the course of time, affect the port of Birmingham, which is becoming more valuable every week as heavy shipments of iron and steel are being made down the river, to be increased when the new equipment begins to arrive in the next few weeks. Mr. Hilton will meet citizens interested in the Warrior River project, and the hope is now held out that there will be an amicable settlement of the matter.

Approximately 7000 tons of Brazilian manganese ore, bound for the Birmingham district, to be used by the Tennessee Coal, Iron & Railroad Co., has arrived at Mobile and will be sent up the Warrior River as well as brought up in railroad cars. It is stated that there will be considerable importation of ores from South and Central America when the big coal bin, which will have an ore-conveying part, is built at Mobile and new equipment on the Warrior River is in service. Steps are now being taken looking to the early erection of the big coal-storage plant at Mobile, the city to donate the site and the Government to build the plant. It is intended to have a storage for 40,000 tons of coal and about 20,000 tons of ore.

The Lehigh Portland Cement Co. is filing deeds on its property purchases at Tarrant City, just outside of the city limits of Birmingham, where there is a bountiful supply of limestone suitable for cement making. It is understood that a plant will be erected shortly, gas and power to be obtained from the Alabama By-Products Co., the by-product coke oven plant of Morris Bush and associates.

The determined fight against the union at domestic coal mines in this State is showing results, and the coal production is steadily increasing. The union mine workers are demanding recognition of their organization. Coal operators, with few exceptions, are not willing to recognize the union. The coal production in Alabama, all kinds of coal, commercial, steam, etc., for the week ending August 7 went to 310,357 tons, compared with 218,300 for the same week a year ago. The production for the week ending August 14 would have shown a material increase over the previous week, it is stated, if there had not been a serious shortage of railroad cars at several mines where there is steady operation. The coal operators say that during this week there will be a break in the striking forces and old employees will seek employment in the mines again.

There is demand for more coke than is being manufactured here, although production is being maintained around the amount that has been noted for some time. Coke prices are firm. Every day or so it is to be heard that consumers of coke have been in this market and have offered premiums that are most interesting, ranging from \$1 to \$3 per ton more for the product than the open prices. Foundry coke, 72 hours, is selling at \$12.50 per ton, while the furnace product, 48 hours, is quoted at \$10 and \$11.

The Sloss-Sheffield Steel & Iron Co. is about to close a deal with the Birmingham Railway, Light & Power Co. to furnish gas from the by-product coke oven plant at North Birmingham for use in Birmingham for lighting, heating and cooking purposes. J. W. East having the contract confirmed by the board of directors. The pipe lines of the local corporation are being extended to the by-product coke oven plant, and within a few weeks from now the gas will be carried to the containers in the heart of the city in quantity.

The scrap iron and steel market shows continued improvement, and the belief is now strong that in the next few weeks there will be an active demand, with the prices all taking on an advance. There has been a few readjustments the past week. Heavy melting steel is being held to firmly by the dealers, the larger consumers offering just \$2 below what the dealers have fixed as their prices. No. 1 cast, stove plate and other products in the old-material class are taking on a little stronger feeling as inquiries begin coming in. So far the dealers have not started in stocking up, but their largest sources of supply are sounding out a higher

price, too. The sanguine feeling noted two weeks ago as to the general improvement in the scrap iron and steel market is still apparent, and with a little easier supply of cars it is believed there can be some activity started up. All prices of scrap now given are said to be low as compared to what will be obtained a little later.

Pig-iron and scrap iron and steel quotations in the Birmingham district are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$42; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$43.70; iron of 2.75 to 3.25 per cent silicon, \$45.40; basic, \$42 to \$43; charcoal, \$55.

OLD MATERIAL.

Old steel axles.....	\$33.00 to \$34.00
Old iron axles.....	33.00 to 35.00
Old steel rails.....	20.00 to 24.00
Heavy melting steel.....	24.00 to 25.00
No. 1 R. R. wrought.....	25.00 to 25.50
No. 1 cast.....	34.00 to 35.00
Stove plate.....	26.00 to 30.00
Old car wheels.....	33.00 to 35.00
Old tramcar wheels.....	32.00 to 35.00
Machine shop turnings.....	11.00 to 13.00
Cast-iron borings.....	11.00 to 13.00

Decline in Connellsville Coal Market.

Uniontown, Pa., August 14—[Special.]—The past week has witnessed a crash in the Connellsville region coal market which is expected to be maintained. Prices for the latter part of the week have dropped in a few instances to as low as \$6, although quotations generally have been nearer \$8, a drop of a little better than \$5 per ton over the quotations for the close of last week, when \$13.50 was quoted.

The change is due to an improved car situation, which has been maintained for some time past and which, observers believe, will be maintained as a result of general orders through the Federal and State agencies diverting equipment to the coal trade. Increased cars, increased production and decreased price sums up the situation for the week.

The coke market presents a little different aspect. While quotations are not available today, there is an unmistakable slipping in the coke market. How long it will take to be adjusted is problematical, for it depends in large measure upon the solution of difficulties which are besetting the blast furnaces and steel mills which have been vitally affected by the car shortage.

Big Coal Consumers Protecting Their Interests by Purchasing Large Coal Properties in West Virginia.

Charleston, W. Va., August 11—[Special.]—The purchase of the Detroit, Toledo & Ironton Railroad by Henry Ford a short time ago and the entrance of Ford into West Virginia and Kentucky as a producer of coal is chiefly important as showing the trend among large manufacturing establishments toward securing their own sources of fuel supply. That has become the first consideration not only among the great steel-manufacturing concerns of the country, but among the by-product concerns and other large corporations of the nation. The advancing price of fuel, the difficulty of obtaining fuel at all times has made it imperative for the large industries to own their own mines. However, the changes of ownership in West Virginia mines as a result of the policy adopted by many manufacturing establishments has been the most marked since the strike of last November.

The United States Steel Corporation has long been interested in West Virginia mines. The United States Coal & Coke Co., operating at Gary and other points in McDowell county, West Virginia, one of the largest producing companies in West Virginia, is a subsidiary of the Steel Corporation, the bulk of the coal produced at the mines named being shipped to the steel plants at Gary, Ind. However, it is understood in many quarters that the United States Steel Corporation wields the dominating influence in the Piedmont Coal Co., which purchased the J. V. Thompson holdings and assumed all the other liabilities of the Thompson coal holdings, the Ayrshire Corporation being the West Virginia holding company.

The Bethlehem Steel Corporation, at a cost of over \$3,000,000, purchased all the holdings of the Elkins Coal & Coke Co. in Preston and Monongahela counties of West Virginia last October in order to increase its fuel supply. A few months later it bought a large acreage of coal land in Marion county and two large mines in the same county from the Jamison Coal & Coke Co., also begin-

ning the development of a third mine in the Marion county field. Instances of purchases of coal properties by industrial concerns in order to insure a regular supply of fuel might be multiplied indefinitely. Those already mentioned, however, will serve to illustrate the new policy of a great many plants throughout the country.

Lancashire Cotton Workers' Demands on Operators.

Manchester, England, July 28—[Special.]—The annual conference of Lancashire cotton operatives has been held this week at Blackpool, when about 250 delegates were present, representing all the trades-unions. Many matters affecting the industrial side of the trade have been discussed, but two questions have attracted considerable attention.

It was only 12 months ago when the workpeople in all sections of the industry secured a reduction of working hours from 55½ to 48 per week. The agreement provided for no further change for 18 months, so no action can be taken until the end of this year. The following resolution was brought forward at the conference: "That this conference of the United Textile Factory Workers' Association instructs the Legislative Council to formulate a demand for a further decrease in the hours of labor, to be made immediately the present agreement terminates." After some discussion it was decided to leave the matter in the hands of the Legislative Council, and their action later on will probably be determined by the state of trade at the end of this year.

The conference attached great importance to a demand for the appointment of a Royal Commission to inquire into the conditions under which the Lancashire cotton industry is carried on. The following resolution was carried unanimously:

"That a Royal Commission be appointed for the purpose of inquiring into the position of and conditions prevailing in the cotton trade, and in particular as to:

"(a) The hours of work in the various grades of cotton workers, and whether, and if so, to what extent, and by what method, such hours should be reduced, regard being had to a reasonable standard of living amongst cotton workers and to the effect of such reduction in the hours of labor on the economic life of cotton workers and the country.

"(b) The cost of production and distribution in the cotton industry, or any industry commonly carried on in connection therewith, or incidental thereto.

"(c) The social conditions under which cotton workers follow their employment.

"(d) The effect of proposal under the above heads upon the development of the cotton trade."

The motion was moved by Mr. J. Bell, M.P., who said that as the employers were aware of all the conditions of employment of the workers, the workers should be informed of what the employers were getting out of the industry. In making reference to the recent recapitalization of mills, the speaker pointed out that one firm had allowed a number of its own workers to take up shares. They were £2 share and 5s. had been called up. A dividend of ¼d. per share had been declared in each of the three quarters since the company was floated, so in less than a year those who had taken up shares had received back the whole of the money they had paid. He admitted that an investigation into the cost of production was a big matter, but it was necessary that they should know what the numerous agents and shipping companies were getting out of cotton goods, as well as what the spinners and manufacturers were making. Mr. Henry Boothman, the general secretary of the Operative Spinners' Amalgamation, in seconding the resolution, explained that it had its origin not in the desire for higher wages or shorter hours, but in the general feeling of indignation that it should have been possible for a group of financiers and company promoters to take advantage of the circumstances of the cotton industry after the war and so make huge fortunes. Mr. Joseph Cross, the general secretary of the Textile Workers' Association, said a knowledge of the true position would tend to prevent strikes and discontent amongst the operatives. Many strikes had taken place because the workers believed their industry could afford to pay them more, or because they did not believe that it was necessary to reduce wages. If the operatives knew the truth they could base their demands on the safety of the trade. One thing they wanted to know was how many people they were carrying on their backs.

It must be said that leading employers have not taken very seriously this demand of the workers for an inquiry into the whole position of the industry. It remains to be seen in what way the Government will be approached, but it is not likely that the Government will give the trades-union officials much encouragement.

Good Roads and Streets

Modern Highways Reduce Taxes in West Virginia County.

Fairmont, W. Va., August 14—[Special.]—With the building of eight miles more of hard-surface roads in Marion county before cold weather sets in, that county will be able to boast of 80 miles of hard-surface roads, representing the proceeds of a number of bond issues. Building of such roads in Marion county has had the effect of reducing taxation, the reduction for the present year in the levy for county Class A roads amounting to 15 cents. Hence, aside from the greater benefits accruing from improved roads, the citizens of Marion county are also getting dividends in the shape of lowered taxation. Twelve miles of hard-surface roads were built in Marion county last year.

Working for State System of Hard-Surface Roads.

Raleigh, N. C., August 11—[Special.]—The State highway convention held here decided to present to the next Legislature, which meets in January, and not to the present one now in special 20-day session, the matter of a State system of hard-surfaced highways. The chief promoter of the convention, which was held on the opening day of the special session of the Legislature, was ex-Mayor T. L. Kirkpatrick of Charlotte. Among the speakers were Cameron Morrison, the Democratic, and John J. Parker, the Republican, nominees for Governor, and Lieutenant-Governor Max Gardner. A committee of seven will draft a bill to be submitted to the Legislature early in January. This bill was agreed on by the convention. It gives the Governor and Highway Commission power to lay out a system of highways to reach every county-seat; buy and operate stone quarries and purchase all needed raw materials; use the tax on automobiles exclusively for highway maintenance; levy a special tax on gasoline; use the State convicts for highway work. The convention urges the United States to build highways through its great forest reserves in Western North Carolina.

Importance of Good Roads to Letter Carriers.

Richmond, Va., August 14—[Special.]—The State Capitol was given a demonstration of patriotic fervor which would be difficult to surpass by any organization, in the meeting of the Virginia Rural Letter Carriers' Association, which has just been brought to a close following a three-day session. Patriotic references were made in every address. Affiliation with American Federation of Labor was turned down by the convention, the delegates expressing themselves that such affiliation might interfere with their loyal support to their Government, which in their instance was also their employer.

The subject of good roads, which is of prime interest to the rural carrier, came in for an important part of the discussion. V. D. L. Robinson, executive secretary of the Virginia Good Roads Association, called special attention to the loss which he declared Virginia is sustaining from the inability of the farmers to produce to capacity by reason of the lack of highway transportation to market. He quoted figures from the United States Bureau of Crop Estimates which indicated that the farm land under cultivation in Virginia could be increased 2,000,000 acres. This idle land, Mr. Robinson stated, is largely the result of bad roads. At the conclusion of his remarks the Virginia Rural Letter Carriers' Association unanimously endorsed the proposed good roads constitutional amendment, which will permit the State Legislature to adequately finance State road construction, and pledged its hearty support to the Virginia Good Roads Association in securing a favorable vote on the amendment next November.

Roanoke was selected as the place for the next meeting. Fred J. Bancroft of Virginia Beach, president; A. F. Duffy, Haymarketown, vice-president, and L. S. Merricks, Sycamore, re-elected secretary-treasurer, were chosen as the officers for the new year.

Will Purchase Lands Preliminary to Building \$10,000,000 Bridge Across Mississippi River at New Orleans.

New Orleans, La., August 14—[Special.]—The Commission Council on August 9 authorized the purchase of lands on both sides of the Mississippi, about 10 miles above Canal street, to serve as terminals of the great bridge across the river, which has been the dream of New Orleans for many decades. This will raze the great Chinese wall to the development of New Orleans, for the Mississippi River has held back the growth of the city to the west.

The lands which the council authorized to be purchased contain more than 600 acres. On the east side, the approach has a frontage of 12,000 feet on the river and contains 358 acres. On the west side, the frontage is 7000 feet and the site contains 275 acres.

With the selection of a site completed, it is the intention of the Public Belt Railway to begin at once the preparation of plans and specifications for the construction of the bridge. By an act of Congress the city has been authorized to build the bridge; from the War Department now must be obtained specifications designating the kind of material and general plan.

It is estimated that the bridge will cost \$10,000,000, a sum which can easily be raised, it is believed, because the necessity of a bridge is generally recognized, for it will enable railroads from the West to have a clear entrance into the city and access to the territory on this side, and because it will enable the extension of the Public Belt System to the west side and the development of dock facilities there. Railroads now cross the river on ferries, a slow and expensive operation.

It was at first proposed to shove a tunnel underneath the river. In 1918 the city of New Orleans engaged the services of Dr. J. A. L. Waddel of Kansas City, bridge authority; J. Vipond Davies of New York, tunnel authority; Col. Bion J. Arnold, terminal authority. Dr. Waddel made out as good a case for the bridge as possible, Mr. Davies did the same for the tunnel, while Mr. Arnold had the task of co-ordinating the railway lines with the new facility. The engineers then compared the construction cost, the maintenance charges and the general advantages of the bridge and tunnel, with the result that the bridge was declared the most feasible method.

Says the special committee of the Public Belt Railway, appointed to have charge of the preliminary work looking to the crossing of the Mississippi: "The bridge will enable the city of New Orleans, through the Public Belt Railroad Commission, to control the greater part of the city's commerce and will provide entrance into the city for railroads not now having entrance into the city. It will be an important link in the highways of the State, which are now being generally extended, and will thus afford easy access for all motor vehicles and pedestrians."

New Louisiana Oil Field North of Baton Rouge.

Baton Rouge, La., August 12—[Special.]—A new oil field was opened in Louisiana this week, when the Como Oil Development Co. brought in a well at Tunica, West Feliciana parish, at a depth of about 3000 feet. While the well is not a gusher, oil is flowing to the top of the casing. Another well will be drilled at once with larger casings. Samples of the oil have been sent to laboratories for testing in order to determine its quality.

The new oil field is located about 50 miles north of Baton Rouge, on the east side of the Mississippi River. Geologists have been examining the land in West Feliciana parish for some time and have reported the surface indications of oil excellent. It was on the advice of geologists that the Como Oil Development Co. drilled the first well.

Oil prospectors are flocking to West Feliciana parish in large numbers, and the town of Tunica is filled to overflowing.

Governor John M. Parker of Louisiana owns a livestock farm within a few miles of the new oil well. Oil experts have pronounced the surface signs on his 4000-acre tract to be equal to those in the Tunica section, and have offered to lease the Governor's property, but he has declined.

The West Feliciana field being within 50 miles of the great Standard Oil refinery at Baton Rouge, and with both rail and river transportation, ample facilities for marketing the product of the field will be forthcoming.

RAILROADS

Over \$22,600,000 More Recommended for Railroads in South.

A report from Washington says that the Association of Railway Executives has submitted to the Interstate Commerce Commission a revised and final report comprising the recommendations of the railroad companies as to apportionments to be made out of the \$300,000,000 revolving fund which was established to aid in rehabilitating the lines. The first report was submitted June 26, and this report includes a number of new recommendations which increase the total from something over \$35,000,000 to something over \$78,000,000, some of these additional recommendations being for the following roads entering into or wholly within the South:

Baltimore & Ohio Railroad—Additional main tracks, yard tracks, sidings, interlockers, telephone train dispatching, shop machinery, bridges, trestles, culverts, heavier rail, \$5,000,000.

Chicago, Rock Island & Pacific Railway—Additional yard tracks and sidings, shop machinery and tools, ballast, bank widening, rails, bridges, \$5,000,000.

Gulf, Mobile & Northern Railroad—Ballasting, \$72,000.

International & Great Northern Railroad—For 90-pound rail, \$40,000.

Louisiana & Arkansas Railway—Tools, shop extension, ties plate, yard and passing tracks, heavier rail, \$165,000.

Louisville & Jefferson Bridge Railroad—Additional yard tracks, coaling station, water station, ash pit, heavier rail and bin, \$162,574.

Missouri Pacific Railroad—Rails, bridges, trestles, additional yard tracks, signals and interlockers, telegraph and telephone lines, fuel and water stations, shop buildings, engine-houses, shop machinery, tools, wharves and docks, \$2,843,179.

Kanawha & Michigan Railway—Passing sidings and cut-off, \$231,204.

Pennsylvania Railroad—Grain elevator, engine-house facilities, yard tracks, shops, \$6,780,125.

Seaboard Air Line—Ballasting, trestles, rail, renewals, dredging, shop machinery facilities, water facilities, passing and yard tracks, \$750,000.

Tampa Northern Railroad—Heavier rails and additional tracks, \$57,000.

Besides the foregoing, the following for equipment is proposed: Gulf, Mobile & Northern Railroad, \$256,050; Norfolk Southern, \$78,000; Fort Smith & Western, \$75,000; International & Great Northern, \$312,500; Missouri, Kansas & Texas, \$1,050,000, estimated; Missouri Pacific, \$97,250.

Loans to enable companies in the South to meet maturing obligations are proposed conditionally as follows: Atlanta, Birmingham & Atlantic, \$200,000; Carolina, Clinchfield & Ohio, \$2,000,000; Missouri Pacific, \$1,454,000; Seaboard Air Line, \$2,921,000; Tampa Northern, \$100,000. The condition is that the remainder of the maturing obligations of the companies shall be effectively financed.

Development Association Reorganizing.

A report from San Antonio, Tex., says that H. M. Madison, agricultural director of the San Antonio & Aransas Pass Railway, has taken steps, as secretary of the Texas Railway Development Association, which was in existence prior to the war, to reorganize that body and make it once more effective. The association was composed of development, immigration and industrial agents of 28 railroads operating in Texas, but it was given up during the war after the establishment of the United States Railroad Administration. During the period of hostilities the work formerly done by the association was conducted by a committee of five, Mr. Madison being one of its members.

Foreign Freight Agent Appointed.

William T. Moore has been appointed foreign freight agent and traffic control manager of the Baltimore & Ohio Railroad to succeed F. J. Couse, who resigned to engage in other business.

Another Big Coal Pier at Norfolk.

Erection of at least one more large coal pier at Norfolk is proposed by the Virginian Railway Co. to provide ample facilities for handling the increased quantities of coal to come from the mines on its route. An official statement says that the plans for the improvement have not yet proceeded far enough to give out any information. It is reported, however, that an option has been taken on three pieces of land, amounting altogether to about 300 acres, and also that more than one pier may be built. The site is near West Norfolk. The proposed pier, it is said, will cost about \$1,000,000.

The Virginian Railway already has one of the largest of coal piers at Sewalls Point, near Norfolk. It is 1060 feet long, and six ships may be loaded simultaneously. The new pier, to be operated by electric power, may be of even greater capacity.

It was reported, in connection with the news concerning the proposed new pier, that the Virginian Railway would double-track its line, or so much of it as might be necessary, to efficiently handle the increased coal traffic, but this assertion could not be confirmed at the company's offices.

Improvement of Bluefield Street Railway.

Bluefield, W. Va., August 13—[Special.]—Steps were taken this week, mainly through the instrumentality of the Bluefield Chamber of Commerce, which will make possible the transfer of ownership of the street-car system now operated by the Appalachian Power Co. in Bluefield to the Princeton Power Co., and the improvement and rehabilitation of this system. S. J. Evans, president of the Princeton Power Co., and S. P. Hardy, treasurer of the company, stated that the company was prepared to assume ownership and management if the business men of Bluefield would raise \$50,000 for additional equipment and for improving the road-bed and tracks. Accordingly, a committee of five was appointed by the Chamber of Commerce, and they secured subscriptions before the end of the week for an entire block of \$50,000 of preferred stock. The transfer of the traction property will be made, it is now stated, without delay.

\$13,000,000 for Improvements and Equipment.

A report from Roanoke, Va., says that the Norfolk & Western Railway Co., counting upon receiving an annual revenue of about \$23,000,000 from increases in rates, plans to spend approximately \$13,000,000 for improvements and additional facilities, the balance of \$10,000,000 going to labor under the increased wage award. It is further said that the improvements and additional facilities proposed will net a return of about 6 per cent, and will include extensions of yards, track improvements, purchase of additional big Mallett locomotives and the building of more coal cars.

New Equipment.

Nashville, Chattanooga & St. Louis Railway has ordered from the Pressed Steel Car Co. 100 hopper cars of 55 tons capacity.

Tennessee Coal, Iron & Railroad Co. is reported in the market for 300 ore cars of 50 tons capacity.

Consolidation Coal Co., Fairmont, W. Va., has ordered 110 hopper cars of 55 tons capacity from the Pressed Steel Car Co.

Louisiana & Arkansas Railroad Co. has asked for authority to issue \$220,000 of five-year equipment notes.

Piedmont & Northern Railroad is reported to have ordered 50 flat cars of 40 tons capacity from the Pressed Steel Car Co.

Textile Mill Notes.

Courtenay Manufacturing Co., Newry, S. C., increased capitalization to \$1,500,000.

A. G. Couch and George Beveridge, Atlanta, Ga., have incorporated the Banning Cotton Mills.

A 100x50-foot standard mill construction building with sprinkler and heating system will be erected for the clothroom of the Erlanger Cotton Mills at Lexington, N. C. J. E. Sirrine & Co., Greenville, S. C., are the architects and engineers.

MECHANICAL

Fireless Steam Locomotive.

The accompanying illustration shows a fireless steam storage locomotive built by the Baldwin Locomotive Works. This type of engine, which has been built in limited numbers, is meeting with success where conditions are favorable to its use—for instance, in and about powder plants, wood mills and other places where fires might easily be started—and the idea of steam storage was developed because the operation of steam locomotives is generally understood, and it is therefore easy to obtain someone to operate these machines.

In this type of locomotive the boiler is replaced by a steam storage tank, which is charged with steam and hot water at high pressure from a stationary boiler plant. When the locomotive is working, the steam, on its way to the cylinders, passes through a reducing valve, so that the maximum pressure in the cylinders is about one-third the storage pressure. As the steam is drawn from the reservoir the pressure in the latter is, of course, reduced, whereupon a certain amount of the stored water evaporates, thus maintaining the steam supply. This process is continued until the steam pressure in the reservoir approximates the working pressure in the cylinders, when the locomotive should be recharged. This is accomplished by admitting steam from a stationary boiler plant through a perforated pipe in the bottom of the reservoir, so that the heating effect throughout the entire body of water is uniform. Owing to the low working pressure, the locomotive cylinders are much larger in dimensions than are those of a locomotive of the usual type and of the same hauling capacity.

The picture displays an exceptionally large fireless locomotive, of standard gauge, recently built by the Baldwin Works for the Eastman Kodak Co. of Rochester, N. Y. It is designed to operate on grades of 2 per cent. with curves of 18 degrees, and the sharpest curves on which it is used are 39 degrees. The locomotive develops a maximum tractive force of 25,700 pounds. Its principal dimensions are: Cylinders, 28 inches diameter by 24 inches stroke; reservoir, diameter 90 inches, length 22 feet 3½ inches; thickness of plates, 15/16 inch; storage pressure, 200 pounds; cylinder working pressure, 60 pounds; driving wheels, diameter 44 inches; total weight in working order, 148,400 pounds.

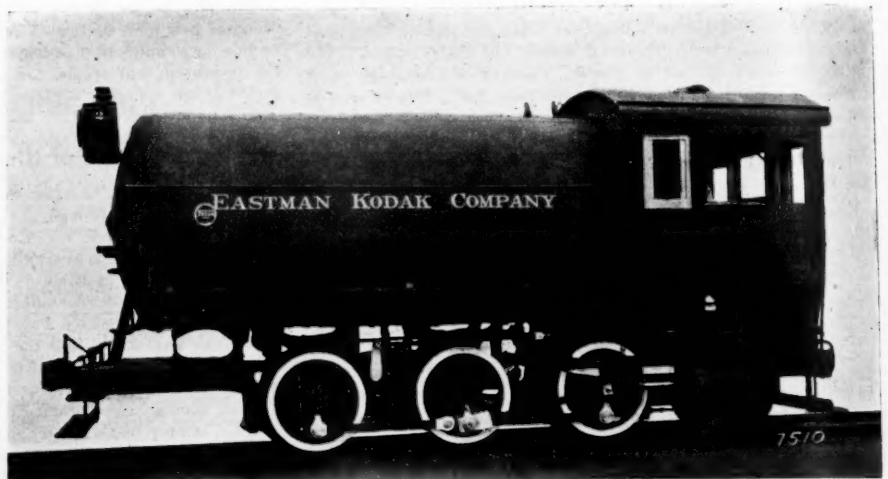
Stump Boring by Portable Power Plant.

A machine for boring stumps preliminary to blasting them is shown at work in the accompanying illustration. It is made by the Cowan-Alford Boring Machine Co., Inc., of Macon, Ga., who state that the device is of recent development, having been in the experimental stage until early this summer. The company was organized several months ago, and while developing the invention they made and sold five of the machines to large landowners and retort operators, who have used it with great success. It is further stated that the machine has been put to every possible test, and was proved satisfactory in every way; also that an experienced operator "can bore 300 holes a day with the machine at a cost of 3½ cents per hole, while hand-boring requires 12 men to bore 300 holes per day at a cost of 14 cents per hole, each man being paid \$3.50 per day."

The picture shows how the machine is operated. Power is supplied by a Cushman four horse-power gasoline engine mounted on a truck of the same make, and the transmission is described thus: "Helical worm gear as used by the best motor trucks.

Gear case sides on horizontal shaft giving it a lateral adjustment alongside the stump of 24 inches. The worm gear actuates a slotted vertical shaft which has a chuck, into which the bit is fitted. A hand-wheel at top gives the operator control, and he does not get off the platform. Every part of the mechanism is of automobile quality." The equipment, it is said, includes two of the best stump-boring auger bits on the market, these being 2 inches diameter by 30 inches twist.

A further description of the capacity of the machine says that it will drive a two-inch auger bit into sound, resinous wood at the rate of 32 inches in one minute or less, having done this in repeated tests under all sorts of stump conditions when the bit was kept reasonably sharp. Two men can handle the machine, moving it from stump to stump, but it is remarked that "it is better to hitch a plug mule between the shafts and let one man drive and operate the machine from the platform. An old mule is cheaper



STEAM STORAGE LOCOMOTIVE FOR INDUSTRIAL USE.

than a man. One outfit working this way is boring from 200 to 500 holes 32 inches deep each day."

Another advantage is that the engine can be used for running



a wood-saw rig, for driving a pump, a corn-sheller, or any other small farming machine.

Cement, Tiles, Hardware, Colors, Etc.

BEHARI LAL MAHESHWARY & Co., Amritsar, India.—We are doing a large trade in white cement, cement, tiles, machinery for tiles, hardware, hosiery and colors, and shall be glad to receive samples, catalogs and lowest quotations.

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Zinc, Cement, Nails, Farming Implements.

ANDRES MARTINEZ, San Pedro De Macoris, Republica Dominicana, West Indies.—I am interested in the following American articles: Zinc (corrugated, for roofing), cement, twisted iron bars, wire nails, barb wire, agricultural implements, etc.

Tin, Brass, Copper, Hardware, Etc.

PAPAPETROS & ORTOLANI, Rue Pal El-Rha (Boite Postale No. 66), Casablanca, Morocco.—We should be glad to have some names of manufacturers of the following goods: Tinplate, brass, copper, wind mills, hardware, and mechanical and industrial manufactures.

Cotton Goods, Paper, Canned Goods, Cement.

SILVESTRE GOMEZ & COMPANY, Havana, Cuba.—We are in excellent shape to act as representatives or agents in the local markets for the following merchandise on a commission basis: Cotton goods (all kinds); paper (all kinds); canned goods, Portland cement.

Wants Manufacturing Lumber.

NICOLAS ST. TRIPHON, Rue Saint Mark, No. 1, Alexandria, Egypt.—My specialty is importing any kind of manufactured lumber into Egypt (as mahogany, oak, walnut, pitch-pine, etc.), and I would be very glad to be in contact with good and reliable manufacturers and exporters of such.

Fishing Tackle.

FRANK FALES & SONS, LTD., 31 Dock St., St. John, N. B.—We do a jobbing business in the maritime provinces of Canada, catering exclusively to the fishing supply and ship chandlery business. We are also extensively in the sporting fishing tackle business, and would be pleased to receive quotations from any American manufacturers on these items.

Saws, Files, Machinery, Railroad Equipment.

R. AMIEL, G. N. Spiliotopoulos & Co., 72 Rue St. Lazare, Paris, France.—We should like all firms interested to supply us with their complete catalogues and price lists in triple, giving us best prices and conditions as well as earliest delivery dates, for cross-cut saws, files, industrial machines, agricultural machines, railway cars, locomotives and railway material.

Perfumery.

JEAN MENAGER, 9, Rue Borghese, Neuilly-Sur-Seine, France.—I shall be very happy to know if different American firms who are not already represented in France in the perfumery business desire such representation. I am on the commission market of Paris for raw materials entering into the manufacture of perfumery. I will then be a patentee or a representative for different gross products entering into this manufacture. Correspondence in French suggested.

Automobiles, Cranes, Coal.

H. A. WILTON VAN REEDE, Postoffice Box 24, Velp, Gederland, Holland.—It is my intention to make connections with American concerns for representation in Holland. I will consider only first-class houses. Personally, I have been in the States a good many years. I am fully acquainted with American business, and I know also what is needed on this side of the pond. I can furnish as reference as to character and business ability some well-known American business men; also American and Holland bank references. I would prefer representation of automobiles and accessories, cranes of all descriptions for loading and unloading vessels, and would also like to hear from Alabama coal operators with view of shipping export coal via New Orleans, La., to Holland.

Tile, China and Pottery Machinery.

SOUTH INDIAN AGENCY CORP., Calcutta, India.—Kindly give us the names of a few manufacturers of machinery for making tile, ceramic and pottery articles. Please bring us into touch with the manufacturers and request them to send us illustrations specifications and particulars and trade prices. Machinery required: Two stoneware pipe-making machines, with dies 3-inch to 10-inch; two upright jolley and one combined jolley and tating machines; four jolley and one power thrower wheel and one blunging machine; 2 disintegrators (powdering stones) and one pug and grinding machine combined; one 6-inch pan and edge roller mill and one magnetic clay separator, and one stilt press; two alsing cylinders, inlaid with porcelain bricks; one wooden filter press, capacity one ton per diem, with pump, complete, and one sifting machine, with 100 to 120 mesh lawns.

Moleskins, Corduroys, Velvets.

S. M. LACOUTURE, Mexico City, Mexico.—I desire to receive, with the greatest possible urgency, the names and addresses of North American manufacturers (not of commission houses or exporters) of the following lines: Moleskins, 28 or 30 inches; corduroys, 28 or 30 inches, and velvets (for men), which I can handle in my regular trade among my steady customers in this country, as I have been doing for years, selling other lines of textiles of American manufacturers without any interruption.

East Indian Agencies Desired.

J. A. DE CRUEZ, 3, Bedfordbury, Strand, London, England.—Indian firms with established London and Eastern connections are open to represent American and Continental manufacturers of machinery, hardware, cars, lorries (trucks), labor-saving devices, etc.; also oil-man stores, confectionery, toilet goods, ironmongery, haberdashery, leather goods, piece goods, etc. Sole agencies especially desired. Firms dealing largely in copra, groundnut, gingilly, tea, coffee, rubber, coir, jute and other fibers, pepper, cinnamon and other spices, cocconut, citronelle and vanilla, oils, mica and other minerals.

Sole Agencies for Cuba Desired.

MANUEL ALVAREZ ALONSO, Amargura 11—Apartado 2142, Habana, Cuba.—We are interested in obtaining exclusive representation of American manufacturers and exporters for Cuba on commission. The lines which we wish to handle are cotton piece goods, men's clothing, ladies' and men's hosiery, men's shoes, dry goods, heavy hardware and miscellaneous hardware, paints, canned goods and groceries—in fact, we are interested in any salable lines. We have offices and showrooms here in Habana and in Santiago de Cuba, and have competent personnel to handle any line. The European trade is already after the business here.

Copper, Cotton, Oil Cake and Meal, Lard, Oil, Etc.

SUPPLY IMPORTING CORP., Berlin N. W. 7, Unter den Linden 51/52, Germany.—We are interested in the import from the United States of copper pigs, ingots, bars, etc.; cotton, manufactured cotton waste, cottonseed oil cake, cake meal, furs and skins, glazed kids, lard, illuminating and lubricating oils, tobacco manufactured, spirits of turpentine and wheat. Our newly organized corporation is now ready to offer to its customers the above-mentioned goods, of which before the war there was a large demand on this side of the ocean. Already inquiries may be found among our mails for them. We desire names and addresses of manufacturers.

Paper, Groceries, Machinery, Shoes, Etc.

UNION COMMERCIAL COMPANY, P. M. Areal, Manager, Habana, Cuba.—We wish to be put into communication with exporting houses of the highest class exclusively—as well in the United States as in other countries—who handle wrapping paper, paper sacks, newsprint paper and other kinds; groceries in general, including wheat flour and cornmeal, rice, brooms, preserves of all classes, lard, ham, bacon and general packing-house products, tomatoes, corn, machinery for sugar mills and general plantation machinery, shoes, jute bags for sugar, various kinds of soap, etc. We will be able to import for our own account or to sell on commission for the whole of the island of Cuba, or for the district of Habana alone, as the exporting house may desire.

Possibilities of Paper Pulp from Bamboo.

New Orleans, La., Aug. 10.—[Special.]—The scarcity of newsprint paper gives special interest to the statement that edible and timber bamboo are both adapted to the climate of the Gulf States and are in a position to aid materially in the production of paper, poles for many purposes for which growing timber is now cut and as an excellent and nutritious vegetable food. This statement is the gist of a report on eight years of experimental work concluded by E. A. McIlhenny on his plantation at Avery Island, La., and made to the United States Bureau of Plant Introduction.

The difficulties which exist in transforming tropical grasses, reeds and rushes into paper are said not to apply to bamboo, and bamboo, unlike the great forests of the temperate zone, grows rapidly, so that the supply of paper material would renew itself from season to season. Burma is one of the tropical countries where bamboo is very abundant, and it has also necessary facilities for transportation.

Not only is the bamboo of rapid growth and some species attain a great size, even 70 to 100 feet in height, with trunks a foot in diameter, but it is often found in arid localities which would otherwise be destitute of vegetation.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ala., Florence.—Lauderdale County Commissioners, James A. Koonce, Chmn.; erect bridge over Burcham Creek; concrete; \$6400; Scruggs Construction Co., Contr., Birmingham, Ala. (Lately noted inviting bids.)

La., Plaquemine.—Texas & Pacific Ry., E. F. Mitchell, Ch. Engr., Dallas, Tex.; erect 15-ft. single-leaf double-track railroad bridge over Bayou Plaquemine; Strauss Bascule Bridge Co., Archt., Chicago, Ill.

Miss., Quitman.—Clarke County Supvrs., W. B. Raley, Clerk; erect steel beam bridge over Pachuta Creek; bids until Sept. 7. (See Machinery Wanted—Bridge Construction.)

N. C., Pantego.—Beaufort County Road Commission, J. D. Bullock, Secy., Washington, N. C.; erect 60-ft. steel bridge, 25-ft. center removable span with piers and abutments; bids until Sept. 6; Gilbert C. White, Engr., Durham, N. C. (See Machinery Wanted—Bridge Construction.)

Okla., Oklahoma City.—Missouri, Kansas & Texas Ry., F. H. Ringer, Ch. Engr., St. Louis, Mo.; erect bridges and culverts, etc.; List & Clifford Construction Co., Contr., Kansas City, Mo.

Tex., Jasper.—Jasper County Commrs., C. C. Brown, County Judge; construct 1400-ft. bridge across Angelina River; bids until Aug. 24. (See Machinery Wanted—Bridge Construction.)

Canning and Packing Plants.

Tenn., Knoxville.—East Tennessee Packing Co.; increase capital from \$50,000 to \$200,000.

Tenn., Nashville.—Neuhoff Packing Co.; erect plant addition; Henschien & McLaren, Archts.

Clayworking Plants.

Ga., Ludowici.—Bricks and Tiles.—A. B. C. Dorming, Fitzgerald, Ga.; purchased Ludowici-Celadon Co.'s plant; remodel; install brick and tile mchy. and pulverizer; daily output to be 60,000 bricks and 50 tons building tile.

Miss., Starkville.—Bricks, etc.—Starkville Brick & Tile Co. organized; A. W. Reynolds, Pres.; Ed. Robinson, Secy.-Treas.; erect brick plant; first kiln to produce 125,000 bricks; second to produce 200,000; present weekly capacity 200,000. (Lately noted inceptd., capital \$10,000.)

Miss., Starkville.—Bricks, etc.—Starkville Brick & Tile Co. organized; A. W. Reynolds, Pres.; Ed. Robinson, Secy.-Treas. (Lately noted inceptd., capital \$10,000.)

N. C., Charlotte.—Bricks.—Hickory Grove Brick Co. inceptd.; capital \$50,000; Edwin L. and Raymond A. Jones, C. H. Clark.

N. C., Charlotte.—Clay Products.—Charlotte Clay Products Co. inceptd.; capital \$125,000.

S. C., Columbia.—Bricks.—Palmetto Brick Co. organized; G. E. Lafaye, Pres.-Treas.; erect 50,000 daily capacity brick plant. (Lately noted inceptd., capital \$100,000.)

S. C., Gaffney.—Bricks.—McCrow Brick Co. inceptd.; capital \$100,000; J. A. Carroll, Pres.; C. D. Meadows, Secy.; T. D. Daniel, Treas.

S. C., Littleton.—Tiling.—Richland Shale Products Co., A. T. Blatchford, Gen. Mgr., 4309 Ridgewood St., Columbia, S. C.; erect 90-ton-capacity tile plant; electric power; \$100,000.

Tex., Cisco.—Bricks.—Cisco Clay & Coal Co.; leased 160-acre tract clay deposits; construct brick and pottery mfg. plant; daily capacity 50,000 bricks; purchased clay excavating mchy.; mine coal.

Tex., Eastland.—Pottery, etc.—Chas. Brewington, Stamford, and C. C. Frampton, Coleman, Tex.; plans construction \$50,000 brick, tile and pottery plant.

Tex., El Paso.—Bricks.—Sheehan North Co.; acquired Atlas Brick Co.'s plant; improve; \$100,000.

Tex., Houston.—Tiles, etc.—Gulf Coast Tile & Marble Co. inceptd.; capital \$12,000; H. A. Bybee, Scott Shambaugh, Tony Albert.

Tex., Houston.—Pressed Bricks.—Houston Pressed Brick Co., E. D. Harlow, Pres., Binz Bldg.; erect brick plant; mchy. purchased.

Coal Mines and Coke Ovens.

Ala., Hilliard.—Hilliard Coal Co. inceptd.; capital \$25,000; J. H. Enson, Pres.; W. B. Earnest, V.-P.; M. H. Johnson, Secy.-Treas.; develop coal tract; lay 500 yds. spur track; erect miners' houses.

Ky., Barbourville.—Coal Spring Coal & Lumber Co. inceptd.; capital \$10,000; C. R. Walker, B. R. Williamson, James H. Jeffries.

Ky., Blackey.—Consolidated Fuel Co.; construct tippie.

Ky., Blackey.—Elk Creek Coal Co. organized; capital \$100,000; M. J. Stidman, Mgr.; develop 500 acres; erect tippie.

Ky., Ford's Branch.—Ford's Branch Coal Co. inceptd.; capital \$3000; L. M. Irwin, Pres.; J. R. Johnson, V.-P.; Helen E. Irwin, Secy.-Treas.; all Pikesville, Ky.; develop 4 acres; daily output 40 tons; install mining mchy. (See Machinery Wanted—Mining Machinery: Rails.)

Ky., Henderson.—Canoe Creek Coal Co.; lately noted organized; develop 500 acres; install electrical mchy.; purchased.

Ky., Louisville.—Turkey Creek Coal Co. inceptd.; capital \$1,000,000; E. K. Wagner, J. C. Reddick; both Louisville; J. J. Ludwick, Cloverdale, Mich.

Ky., Pikeville.—E. E. George Coal Co.; increased capital from \$50,000 to \$100,000.

Ky., Stone.—Bud Coal Co. inceptd.; capital \$5000; Bud Blackburn, J. C. Cantrell, G. R. Blackburn, Jr.

Okla., Henryetta.—McGennis Coal Co. inceptd.; capital \$75,000; R. R. Fretwell, J. E. Whitenton.

Tex., Cisco.—Cisco Clay & Coal Co.; leased 160-acre tract; develop coal and clay deposits. (See Clayworking Plants.)

Va., Lynchburg.—Upper Banner Coal Co.; increased capital from \$500,000 to \$800,000.

W. Va., Buckhannon.—Iris Coal Co. organized; Frank E. Williams, Pres.-Mgr.; Enoch Bellis, Secy.-Treas.; develop 300 acres; daily output 250 to 400 tons. (Lately noted inceptd., capital \$50,000.)

W. Va., Charleston.—Houghton Gas Coal Co. inceptd.; capital \$50,000; M. J. Houghton, C. C. Taylor, both Charleston; M. J. Nelson, Malden, W. Va.

W. Va., Clarksburg.—Apex Coal Co. inceptd.; capital \$50,000; John B. Hefner, John W. Keister, C. A. Butcher.

W. Va., Fort Defiance.—Fort Defiance Coal Corp. (lately noted chartered, capital \$150,000) organized; W. L. Burruss, Pres.; S. H. Croft, V.-P.; R. B. Willis, Secy.; W. H. Evans, Treas.; R. H. Massey, Mgr.; all Ansted, W. Va.; develop 400 acres; daily output 250 tons. (See Machinery Wanted—Mining Machinery.)

W. Va., Grafton.—Jerry Run Coal Co. organized; capital \$75,000; U. S. Morrow, Pres.; W. P. Withers, V.-P.; G. W. Ford, Secy.; N. C. Musgrove, Treas.; John L. Robinson, Mgr.; develop 130 acres; daily output 1500 tons. (See Machinery Wanted—Cars; Rails; Building Material; Railway Switches, etc.)

W. Va., Jesse.—Daubenspeck Coal & Land Co. inceptd.; capital \$100,000; D. Forest Early, A. W. Daubenspeck; both Mullens, W. Va.; Fred N. Stewart, Princeton, W. Va.

W. Va., Masontown.—Masontown Coal Co. inceptd.; capital \$25,000; Earl Dixon, E. E. Williams, Loar Dixon.

W. Va., Morgantown.—Green Ridge Coal Co. inceptd.; capital \$50,000; W. W. Mayfield, Carney Fortney; both Morgantown; A. W. Hawley, Masontown, W. Va.

W. Va., Perry County.—J. M. Coal Co. inceptd.; capital \$25,000; E. H. Lopinsky, I. J. Rhodes, L. A. Osborn; all Welch, W. Va.

W. Va., Riverview.—Riverview Coal Co. (lately noted inceptd., capital \$10,000) organized; W. L. Burruss, Pres.; Evan Massey, V.-P.; R. B. Wills, Secy.-Mgr.; W. H. Evans, Treas.; all Ansted, W. Va.; develop 150 acres; install mining mchy.; daily output 100 tons. (See Machinery Wanted—Mining Machinery.)

Concrete and Cement Plants.

Ala., Birmingham.—Portland Cement.—Marquette Cement Mfg. Co., Marquette, Bldg., Chicago, Ill.; reported to build large plant in Birmingham district; writes to Manufacturers Record: Making preliminary survey of South; do not contemplate erecting mill in immediate future; will advise when developments are definite.

Ala., Birmingham.—Portland Cement.—Lehigh Portland Cement Co., Young Bldg., Allentown, Pa.; reported to have purchased 93

acres land as site for big works; advises Manufacturers Record: Not ready to make statement regarding possible plans for cement plant at Birmingham.

Ala., Ragland.—Portland Cement.—Geo. E. Nicholson of Nicholson Construction Co., Commerce Bldg., Kansas City, Mo.; organize company to mfr. Portland cement; overhauling plant; develop stone quarry 5 mi. from works; constructing standard-gauge railway to quarry; installing crusher; proposes daily production 3000 bbls. cement. (Geo. E. Nicholson lately noted purchasing Coosa Cement Co. properties.)

Tenn., Chattanooga.—Portland Cement.—Signal Mountain Portland Cement Co., Geo. P. Deikmann, Mgr., Demopolis, Ala.; build plant with daily capacity 3000 bbls. cement and increase to 5000; purchased site at foot Signal Mountain, 5 mi. from Chattanooga; purchases include 600 acres limestone land; contracted for coal from nearby coal mines. (Lately noted inceptd. with \$6,000,000 capital by Dieckmann, C. E. James of Chattanooga, A. Y. Jameson of Stangar, Iowa, to build 3000-bbl. plant, etc.)

Cotton Compresses and Gins.

Tex., Floydada.—Farmers' Gin Co., W. L. Boerner, Secy.-Treas.; W. B. Jones, Mgr.; erect \$30,000 building; 1 story; 6134 sq. ft. floor space; frame and iron; install \$16,000 cotton gin; Murray Gin Co., Archt., Dallas, Tex.; A. A. Jones, Contr., Floydada. (Lately noted organized to build gin.)

Tex., Houston.—Menkwa Compress Co. organized; M. Yamakawa, Prest.; W. W. Murphy, Treas. and Gen. Mgr.; construct building; B. F. & C. M. Davis Co., Contrs. (Lately noted inceptd. under Fort Worth; capital \$375,000.)

Tex., Klomitia.—Klomitia Gin Co. inceptd.; capital \$10,200; J. W. Peterson, G. T. Wright, W. T. Scott.

Tex., Petersburg.—Petersburg Gin Co. inceptd.; capital \$14,000; E. B. Shankle, L. S. Claiter, H. H. Roberson.

Va., Lummis Station.—Farmers' Gin Corp. chartered; capital \$50,000; R. C. Norfleet, Prest.; J. T. Smith, Secy.; J. C. Byrd, Holland, Va.

Cottonseed-Oil Mills.

N. C., Newbern.—Newbern Cotton Oil & Fertilizer Mills; increased capital from \$100,000 to \$300,000. (See Fertilizer Factories.)

Drainage Systems.

Miss., Sumner.—Blue Lake Drainage Dist. Comms., T. B. Abbey, Prest.; construct 11 mi. ditches; drain 16,700 acres; \$90,000; bids until Aug. 19; A. L. Dabney, Conslt. Engr., Memphis, Tenn. Lately noted bids until Aug. 5. (See Machinery Wanted—Drainage System.)

N. C., Greenville.—Pitt County Drainage Dist. No. 2, Drainage Dist. Comms., Geo. T. Leach, Chrmn.; construct 23½ mi. ditches; 1,108,564 cu. yds. excavation; bids until Aug. 30; Harding & Rivers, Engrs. (See Machinery Wanted—Drainage System.)

Tex., Corsicana.—Levee Improvement Dist. No. 8, Navarro County, Guy M. Gibson, Judge; construct 5 mi. canal and 6 mi. levee; has equipment; W. W. Harrison, Engr., Corsicana; Ennis Construction Co., Contr., Ennis, Tex. (Bids lately noted.)

Electric Plants.

Ala., Birmingham.—Interstate Electric Co. of Alabama inceptd.; capital \$350,000; M. L. Harty, S. L. Mackey, J. D. Frook; all Wilmington, Del.

Ark., Piggot.—Myers Stave & Mfg. Co., J. R. Myers, Mgr.; erect power-house and main factory; 40x60 ft.; \$400,000.

Fla., New Smyrna.—City; install electric-lighting plant; vote Sept. 7 on bonds. Address The Mayor.

Miss., Oxford.—City; repair, remodel and improve light plant and water-works; vote Aug. 27 on bond issue. Address The Mayor.

Okla., Erick.—City, J. A. Richardson, Mgr.; enlarge electric-light plant and water-works; install sewer system; \$120,000.

Tex., Abilene.—Abilene Gas & Power Co.; establish \$1,000,000 power and ice plant.

Fertilizer Factories.

Ark., Waldo.—Waldo Fertilizer Co. inceptd.; capital \$25,000; L. D. Kemmerer, J. W. Ithea, Charles Clark.

Ill., Curtis Bay.—Swift & Co., Chicago, Ill.; enlarge plant; erect 1-story 170x40-ft. steel and concrete building; \$45,000; A. F. Feali Co., Contr.

N. C., Newbern.—Newbern Cotton Oil & Fertilizer Mills; increased capital from \$100,000 to \$300,000; C. L. Ives, Mgr.; has 140x120-ft. frame construction building; \$35,000; purchased \$7000 mch. from Atlanta (Ga.) Utility Works; daily output 300 tons mixed fertilizers; Chemical Construction Co., Archt.-Contr., Charlotte, N. C.; Jns. E. McKee, Constr. Engr., Newbern, N. C.

N. C., Wilmington.—F. S. Royster Guano Co., Munsey Bldg., Baltimore, Md.; plans erection branch plant.

Flour, Feed and Meal Mills.

Md., Crisfield.—Potomac Poultry Food Co., W. D. Wilson, Prest., Keyser Bldg., Baltimore; erect 1-story 144x125-ft. concrete and steel building covered with corrugated steel; 30x20 ft. leanto; concrete silo, office building, crane runway, wharves and dock with concrete loading platform; bids until Aug. 16; Herman F. Doeelman, Engr., 507 N. Charles St., Baltimore.

Okla., Frederick.—Billingslea Grain Co.; erect 35,000-bu. capacity grain elevator; \$25,000; contract let.

Okla., Gate.—Settlers Milling, Canal & Reservoir Co. inceptd.; capital \$8000; Wm. and W. L. Little, Kenny Lotspeich; all Doby Springs, Okla.

Okla., Granite.—Farmers' Co-operative Elevator Co.; rebuild burned grain elevator; \$20,000.

Okla., Oklahoma City.—Seannell-Winters Grain Co. inceptd.; capital \$25,000; E. M. Seannell, G. F. Patterson, Franklin Winters.

Tex., El Paso.—Community Milling Co., G. B. Jackson, Secy.-Treas., 1601 Bassett Ave.; install storage tanks. (Lately noted increased capital.)

Tex., Fort Worth.—Fort Worth Elevator Co.; increase capital from \$750,000 to \$1,000,000.

Tex., Plainview.—Joe Kellehar; interested in plan to erect 500,000-bu. grain elevator; \$250,000.

Tex., Waxahachie.—Stone-McKenna Milling Co. organized; T. A. Ferris, Prest.; G. W. McKenna, Secy.-Treas.; Gaylord J. Stone, Mgr.; has building; install general feed-grinding and mixing mch. for stock and poultry feeds. (Lately noted inceptd., capital \$40,000.)

Foundry and Machine Plants.

Ala., Birmingham.—Pipe, etc.—Iron City Pipe & Foundry Co.; double plant's capacity; erect foundry addition; install \$400,000 equipment,

including master patterns, flasks, etc.; purchased; mfr. standard and extra heavy soil pipe in sizes 2 to 12 in.

Ark., De Witt.—Machine Shop.—De Witt Machine Shop Co. inceptd.; capital \$50,000; erect plant.

Fla., Miami.—Machinery.—Fin-Nor Machine Co. inceptd.; capital \$25,000; John L. North, Prest.-Treas.; Henry R. North, V.-P.; Thos. B. Finlay, Secy.

Ky., Louisville.—Elevators, etc.—American Elevator & Machine Co., 500 E. Main St.; erect 2-story 53x51-ft. addition; brick and frame; wood floors; day labor.

Ky., Owensboro.—Ditchers and Graders.—Owensboro Ditcher & Grader Co., W. A. Steele, Prest.; increased capital from \$250,000 to \$500,000; merge with Simplex Farm Ditcher Company.

Md., Baltimore.—Iron Work.—James J. Lacy Co., Block and Willis Sts.; erect 1-story 68x52-ft. plant addition; brick construction.

Md., Hagerstown.—Steel Products.—Maryland Steel Products Co. inceptd.; capital \$2,500,000; Melville P. Rodermond, 24 Park Row; Bernard R. Youngman, 600 Parkwyth Ave.; both New York; Henry Huss, Oscar Aurich; both Hagerstown; continues established plant. (Maryland Pressed Steel Works lately noted sold to New York interests.)

Mo., St. Louis.—Electrical.—Advance Electric Co., Edward Breth, Prest., 6315 Maple Ave.; erect 1-story 100x50-ft. addition; Nier & Meng, Contrs., 1039 Marion Ave.

Mo., St. Louis.—Ranges.—Majestic Mfg. Co., R. H. Stockton, Prest., 2014 Morgan St.; remodel plant; J. Hal Lynch, Archt., Dolph Bldg.; let following contracts; heating to Edwards Heating Co., 2628 Olive St.; plumbing to McNamara Plumbing Co., 5376 Easton Ave.; painting to Motie & Williams, 5382 Easton Ave. (Lately noted.)

Okla., Pawhuska.—Tanks.—Southwestern Tank Co. inceptd.; capital \$150,000; John W. Tillman, O. P. Fitzhugh, C. H. Loop.

S. C., Hayne.—Cotton Gins.—Lummus Machinery Co. J. L. Lummus, Prest., Spartanburg, S. C.; erect 50x160-ft. 2-story plant; brick construction; mfr. cotton gin. mch.

Tex., Fort Worth.—Steel and Iron.—Southwestern Steel & Iron Co. inceptd.; capital \$7000; J. R. Lowry, S. R. Hord, F. A. Eustace.

Va., Norton.—Armature.—Norton Armature Works inceptd.; capital \$5000; D. B. Crawford, Prest.; A. P. Spracher, Secy.

W. Va., Sistersville.—Transmission Gears.—Benjamin F. Webb, Andrew J. Karl; organize \$2,500,000 company; mfr. transmission gears for motors.

W. Va., Welch.—Separators.—Dry Separator Co. of America inceptd.; capital \$50,000; J. E. Woods, W. J. O'Toole, A. Blunkett; mfr. dry separating mch.

W. Va., Wheeling.—Foundry.—Wheeling Axle Co.; improve plant; erect foundry; contract let; install additional mch.; merge with Spears Axle Co.

Gas and Oil Enterprises.

Ky., Ashland.—Charlotte Oil Co. inceptd.; capital \$25,000; H. G. Hazelrigg, M. B. and J. F. Bailey.

Md., Baltimore.—Marnumex Oil Co., 43 Central Savings Bank, inceptd.; capital \$250,000; Harry S. Robinson, Jno. Ryan, Franklin H. Griffith.

Okla., Oklahoma City.—Sterling Oil Co. inceptd.; capital \$450,000; G. Chaffee, L. O. Pruett, Maude H. Teller.

S. C., Darlington.—Palmetto Gas & Improvement Co. organized; C. L. Romedy, Prest.-

Mgr. and Constr. Engr., Florence, S. C.; J. F. Cahill, Secy.-Treas.; erect \$20,000 fireproof building; install gas mch. and pipe lines. Lately noted inceptd., capital \$50,000. (See Machinery Wanted—Gas Plant Equipment; Pipes.)

Tex., Bend.—Bend Oil Co. inceptd.; capital \$15,000; L. E. Doss, W. B. Baxter, A. T. Pope.

Tex., Sherman.—Montoya Oil & Gas Co. organized; capital \$150,000; P. H. Luby, C. H. Lackey, S. L. Ricketts.

Tex., Texarkana.—Gasoline.—Continental Gasoline & Oil Co.; increase capital from \$10,000 to \$20,000.

Texas.—Fulton Production Co. inceptd.; capital \$100,000; Claud W. Watts, E. Morris, A. E. Ramsaur; all Atlanta, Ga.; develop oil lands.

Va., Richmond.—Gas Plant.—City, Chas. E. Bolling, Engr.; repair compressor plant at gas works; \$15,000.

Va., Staunton.—Citizens' Gas Co. inceptd.; capital \$100,000; J. L. Witz, Prest.; Chas. S. Hunter, Secy.; acquired Staunton Gas Co.'s plant.

W. Va., Beckley.—Raleigh Oil & Gas Co. inceptd.; capital \$50,000; C. O. Dunn, W. W. Hume; both Beckley; O. B. Lynch, Glenville, W. Va.

W. Va., Clarksburg.—Valley Bell Oil & Gas Co. inceptd.; capital \$20,000; Chas. H. Sams, C. J. Fischer, H. F. May.

W. Va., Weston.—Benson Oil Co. inceptd.; capital \$25,000; C. E. McGinnis, G. W. Bock, J. L. Polling.

Hydro-Electric Plants.

Ala., Loek 12.—Alabama Power Co., Thos. W. Martin, Prest., Birmingham; install additional (sixth) unit; 19,500 H. P.; increases total development to 105,000 H. P.; all contracts awarded. (Proposed additional developments lately noted.)

Mo., Eminence.—Shannon County Copper Mining Co., L. O. Nelder, Springfield, Mo.; build dam and hydro-electric power plant on Jack's Fork.

N. C., Pilot Mountain.—Job Hiatt; construct 4-mi. transmission line, costing \$4000; build hydro-electric plant; develop 1000 H. P.; I. W. Barber, Engr., Mt. Airy, N. C.

Okla., Collinsville.—City; erect dam and intake pumping station on Caney River; install 350 K. V. A. generator and 250 H. P. boiler; \$120,000; contemplated. Address The Mayor.

Ice and Cold-Storage Plants.

Fla., Jacksonville.—Porter-Judy Fruit Co.; remodel plant; install refrigeration equipment; \$40,000.

Fla., Lucerne Park.—Lucerne Park Packing Co.; erect plant, with cold-storage facilities; \$100,000.

Fla., Miami.—Miami Ice Cream & Dairy Co., 411 8th St.; erect 50x100-ft. concrete building; install 15-ton ice and ice-cream mch.; \$30,000; Howard Construction Co., Contr.; A. E. Lewis, Archt. (See Machinery Wanted—Boiler; Engine.)

Fla., Pensacola.—Gulf Coast Fishing Corp.; establish cold-storage plant.

Ga., Commerce.—Commerce Ice Co. inceptd.; capital \$25,000; J. C. Verner, Prest.; W. Y. Harber, V.-P.; E. B. Anderson, Secy.-Treas.

Ga., La Grange.—La Grange Packing Co.; establish cold-storage and packing plant.

La., Alexandria.—Alexandria Ice & Cold Storage Co., Edwin Harding, Gen. Mgr.; expend \$75,000 on plant improvements; increase capacity; build additional storage space.

La., Baton Rouge.—Standard Ice Co.; erect 3000-ton ice-storage plant.

Md., Salisbury.—W. F. Messick Ice Co. organized; Fred P. Adkins, Prest.; Geo. T. Houston, V.-P.; Ralph H. Grier, Secy.; W. F. Messick, Treas.-Mgr.; erect 25x100-ft. ice plant and 60-ft. storage-house; mill construction; install electric-driven mch.; probably add meat storage; Hastings & Parsons, Centrs. (W. F. Messick lately noted to organize company.)

Mo., Leeds.—Blue Valley Ice & Storage Co.; purchased plant; remodel for ice and cold storage.

N. C., Asheville.—Carolina Creamery Co.; erect plant; install refrigerating equipment; \$200,000.

N. C., Charlotte.—Standard Ice & Fuel Co.; install equipment; double capacity; \$150,000.

N. C., Winston-Salem.—Miller Hinshaw; establish ice plant.

N. C., Winston-Salem.—Crystal Ice Co.; improve plant; install mch.; increase daily capacity to 40 tons; York Mfg. Co., Contr., York, Pa.; erect 2000-ton storage building.

S. C., Orangeburg.—I. E. Salley, R. J. Green; establish 6-ton daily capacity ice plant.

Tenn., Chattanooga.—J. H. Allison & Co.; erect cold-storage warehouse; install cooling system; Henschien & McLaren, Archts., Chicago.

Tex., Abilene.—Abilene Gas & Power Co.; establish ice and power plant; \$1,000,000.

Tex., El Paso.—Speers & Miller; erect ice plant; purchased site.

Va., Norfolk.—Kennebec Ice & Delivery Co., W. L. Petty, Prest.; increased capital from \$25,000 to \$50,000.

Land Developments.

Ark., Little Rock.—Bert Johnson Peach Orchards inceptd.; capital \$1,800,000; Bert Johnson, Geo. H. Bell, H. C. Wilson.

Florida.—Florida Truck & Citrus Lands Corp. chartered; capital \$200,000; Knox T. Thomas, J. F. Ange, U. G. Staton; all Atlanta, Ga.

N. C., Cherryville.—Cherryville Mfg. Co.; extend and develop village; E. S. Draper, Landscape Archt., Charlotte, N. C., and New York.

W. Va., Green Ridge.—United Orchards Co. organized; capital \$2,500,000; Hamilton F. Greene, Alexander T. Douglas, both Washington, D. C.; Robt. G. Carter, Supvr., Chevy Chase, Md.

W. Va., Martinsburg.—Pomona Orchard Co. inceptd. capital \$50,000; J. W. Gatrell, H. G. Tonkin, H. H. Emmert.

Lumber Manufacturing.

Ala., Orrville.—Berry-Reeves Lumber Co.; rebuild burned drykilns and planing mill; loss \$40,000.

Ark., Texarkana.—G. W. Bishop; rebuild burned saw and planing mill; loss \$25,000.

Ark., West Helena.—Pekin Timber Co. incorporated; capital \$130,000; J. C. Miller, West Helena; H. G. and W. P. Herget, Pekin, Ill.

Fla., Kissimmee.—J. D. Green; develop 9000-acre timber tract; daily output 30,000 ft.

Ky., Frankfort.—Leland G. Banning Lumber Co., W. S. Rosson, Mgr.; purchased established plant; install 125 to 150 H. P. engine, 70 H. P. boiler, set life rolls; increase capacity. (Supersedes recent item.)

Miss., Mathison.—J. M. McCain & Son; rebuild burned sawmill; loss \$8000.

Tenn., Memphis.—Monarch Lumber Co. inceptd.; capital \$25,000; A. S. Chave, John E. Racek, George W. Neal.

Tex., Beaumont.—Charles Sigler; erect 25,000-ft. daily capacity sawmill; contemplated.

Tex., Sherman.—Lyon-Gray Lumber Co.; increased capital from \$600,000 to \$700,000.

Tex., Sour Lake.—Sour Lake Lumber Co.; erect 50,000-ft. daily capacity sawmill.

W. Va., Elkins.—Joyce Lumber Co. organized; H. F. Riley, Prest., Chicago, Ill.; P. J. Joyce, V.-P. and Gen. Mgr., Elkins; Linley Kleingans, Secy.-Treas., Pittsburgh, Pa.; purchased 6,000,000 ft. timber; install mills. (Lately noted inceptd.)

W. Va., Hinton.—Long Bottom Lumber Co. inceptd.; capital \$50,000; T. H. Lilly, William Plumley, both Hinton; L. K. Sturgeon, St. Albans, W. Va.

Metal-Working Plants.

Ala., Birmingham.—Enamelware.—American Enamel Iron Products Co., Chicago, Ill.; purchased 10-acre site; erect plant; mfrs. bathtubs, bathroom fixtures, etc.; to melt 40 to 50 tons pig-iron daily.

Ky., Covington.—Bronze.—Michaels Art Bronze Co., F. L. Michaels, Prest., 239 E. Scott St.; erect 3-story 37x45-ft. addition; contemplated.

Ky., Lexington.—Wire Nails.—Kentucky Steel Products Co. organized; John R. Humphrey, Prest.; B. F. Buckley, V.-P.; James T. Stone, Secy.; John L. Buckley, Treas.; E. E. Ayers, Mgr.; has 2-story 100x50-ft. building; erect office and cleaner-house; install electric-driven mch.; purchased; specialize in mfrs. wire nails and other wire articles; daily capacity 25 tons. (Lately noted inceptd., capital \$250,000.)

La., Lake Charles.—Steel Tanks.—Southland Metal Co. organized; Dallas Gross, Prest.; Adolf Bischoff, V.-P.-Mgr.; Henry Reid, Secy.-Treas.; has 7000 sq. ft. building; install mch. for steel tank construction. Supersedes recent item under Foundry and Machine Plants (Metal-working Machinery).

Md., Towson.—Special Machinery.—Black & Decker Mfg. Co.; increased capital from \$350,000 to \$2,000,000; mfrs. special mch.

N. C., Charlotte.—Automobile Locks.—Thief-Proof Lock Co. inceptd.; capital \$25,000; J. H. M. A. and I. W. Woolley.

Tex., San Antonio.—Needles.—Fletcher All-tones Needle Co. inceptd.; capital \$10,000; J. M. and Joe L. Nix, Henry C. King, Jr.

Mining.

Ala., Heflin.—Mica and Gold.—Seven Sisters Mica Gold Mining Co. inceptd.; capital \$50,000; Elizabeth W. York, Annie Schappio, Helen Wallace.

Ga., Augusta.—Sand and Gravel.—Augusta Silica Mining Co., Campbell Bldg. (lately noted inceptd., capital \$50,000); organized; Geo. W. Summs, Prest.; W. H. Rook, V.-P.-Mgr.; F. P. Farrar, Secy.-Treas.; develop sand and gravel tract; daily output 15 cars. (See Machinery Wanted—Dredging Equipment.)

Ga., Cartersville.—Sand.—Allatoona Sand Co. inceptd.; capital \$10,000; C. H. Rutherford, H. S. Benson.

Ky., Marion.—Fluorspar.—Marion-Nashville Fluorspar Co. inceptd.; capital \$25,000; Geo. K. Killebrew, Jr., I. H. Clement, J. H. Persons.

N. C., Asheville.—Feldspar.—Carolina Feldspar Co. organized; J. Frazier Glenn, Prest.-Mgr. and Const. Engr.; E. P. Brownell, Jr., V.-P.; O. S. Suggett, Secy.; James R. Bush, Treas.; develop 105½ acres; daily output 100 tons or more; install \$40,000 machinery. (Lately noted inceptd., capital \$250,000.)

S. C., Brookland.—Sand, etc.—New Brookland

Sand Concrete Co. inctpd.; capital \$50,000; D. E. George, Prest.; J. S. Bundrick, Secy.-Treas.; both New Brookland; Chas. G. Sonntag, V.-P.; Gaston, S. C.

S. C., Columbia—Sand.—Southern Silica Mining & Mfg. Co., 1643 Main St.; purchased additional sand pit; purchased new loading machinery; increased daily output to 40 carloads.

Va., Henry—Talc.—Blue Ridge Talc Co., C. O. Kitson, Secy.; increased capital from \$100,000 to \$150,000.

Miscellaneous Construction.

Fla., Jacksonville—Jetties.—United States Engr. Office, Masonic Temple; construct jetty at entrance to St. Johns River; bids until Sept. 15; J. M. Braxton, Asst. Engr. (See Machinery Wanted—Jetty Construction.)

Fla., Pensacola—Dock.—City Comsn.; construct municipal dock and belt-line railway; previously voted \$400,000 bonds.

Mo., Louisiana—Swimming Pool.—Buffeen Tool Co.; construct 30x80x9-ft. swimming pool; 50x36-ft. dressing-room; 136x50-ft. main building; day labor.

Tex., Galveston—Seawall.—Galveston County Comms.; cost completion seawall from Station 103 to connect with south jetty and fill behind this estimated at \$2,100,000 in annual report submitted by United States Engrs. to Maj. L. M. Adams, Federal Engr. in charge. There is still required extension of seawall from Station 103 for 2860 ft. farther to connect with south jetty and fill behind that all Govt. portion, width 200 ft., with boulevard on top of this.

Va., Norfolk—Coal Piers.—Virginia Ry., H. Fernstrom, Ch. Engr., Norfolk, purchased 300-acre site; construct \$1,000,000 coal piers on west side Hampton Roads; double-track its railway grade from Virginia coal mines to seaboard; engineer wires Manufacturers Record; Plans for additional pier not proceeded far enough to give out information.

Miscellaneous Enterprises.

Ala., Andalusia—Potato Curing.—Thomas G. Conner; erect sweet-potato curing and storage plant; 25,000 bu. capacity.

Ala., Birmingham—Publishing.—Birmingham Publishing Co.; erect 1-story building; \$12,000.

Fla., Jacksonville—Contracting.—Yonge Electrical Shops of Florida inctpd.; capital \$100,000; Cleveland R. Lovell, Prest.; H. S. Griggs, V.-P.; F. D. Brennan, Treas.

D. C., Washington—Publishing.—Evening Star, T. Moyes; erect 11-story addition; Geo. A. Fuller Co., Contr., American Bldg.; Marsh & Peters, Archts., 14th and G Sts.

Fla., Palatka—Hardware.—Tilghman Hardware Co. inctpd.; capital \$100,000; N. J. Tilghman, Prest.; L. E. Tenny, V.-P.; J. Q. Tilghman, Secy.-Treas.

Ga., Atlanta—Laundry.—Bell Laundry Co. inctpd.; capital \$40,000; Geo. H. Fauss, T. A. Martin, T. C. Perkins.

Ga., Atlanta—Nursery.—Anschutz Floral Co. inctpd.; capital \$60,000; Geo. Sofianos, Atlanta; Mrs. Lulu Anschutz; establish nursery.

Ky., Louisville—Garage Supplies.—Garage Equipment & Supply Co. inctpd.; capital \$10,000; C. D. Moody, James Yewell, John H. Chandler.

Ky., Louisville—Fair.—Kentucky State Fair; reported considering bond issue to erect Merchants and Manufacturers' building; \$250,000 to \$300,000.

Ky., Richmond—Electrical.—Davison-Telford Electric Co. inctpd.; capital \$10,000; F. M. Davison, R. L. Telford, Jr., J. J. Greenleaf.

La., Alexandria—Printing.—Standard Printing Co. inctpd. capital \$800; Charles J. Fleming, Francis Gehring, P. T. Duty.

Md., Baltimore—Hardware.—Canton Hardware & Supply Co., 308 S. 3d St., inctpd.; capital \$600; Charles A. Deacon, Harry L. Harman.

Md., Baltimore—Typesetting.—Monotype Composition Co., 208 S. Hanover St., organized; J. Harry Halt, Prest.-Treas.-Mgr.; Chas. H. Buck, V.-P.; A. M. Halt, Secy.; install additional equipment; purchased. (Lately noted inctpd.)

Mo., Kansas City—Greenhouses.—C. A. Chandler, 47th and Mill Creek Blvd.; erect greenhouse; American Greenhouse Mfg. Co., Contr., Chicago, Ill.

Mo., Kansas City—Laundry.—Loose-Wiles Biscuit Co.; erect 1-story addition to 7-story laundry building; 125x60 ft.; Shepard & Wiser, Archts., 302 R. A. Long Bldg.; Louis Breitag Construction Co., Contr., 3701 W. Prospect Ave.

N. C., Asheville—Transportation.—Asheville-Waynesville Bus Line inctpd.; capital \$25,000; H. H. and J. H. Colby, Troy Bryson; operate passenger and freight automobiles between Asheville and Waynesville.

N. C., Wilmington—Dyeing.—Eureka Dye Works, C. D. Myers, Mgr.; erect plant addition; install equipment; \$5000.

S. C., Aiken—Laundry.—Real Estate & Fidelity Co., H. M. Dibble, Prest.; erect 40x60-ft. laundry building; fireproof; \$15,000; day labor.

S. C., Charleston—Ship Chandlery.—American Ship Chandlery Co. inctpd.; capital \$8000; Marcus Bloom, Prest.; Samuel Cohen, V.-P.; Milton Pearlstone, Secy.; J. M. Hirsemann, Treas.

S. C., Columbia—Electrical Supplies.—Home Light & Power Co. inctpd.; capital \$20,000; S. O. Lindeman, Prest.-Secy.; M. G. Lindeman, V.-P. and Treas.

Tex., Bonham—Potato Curing.—Bonham Sweet Potato Curing Plant; increased capital from \$20,000 to \$30,000.

Tex., Mercedes—Electrical Supplies.—Electric Supply Co. inctpd.; capital \$10,000; J. H. Jacobson, E. R. King, J. H. Winsor.

Tex., Rockport—Livestock.—Satex Live Stock Co. inctpd.; capital \$20,000; A. E. Childs, T. T. Johnson, Gordon Gibson.

Va., Lexington—Transfer.—Lindsay's Taxi Co. inctpd.; capital \$5000; John W. Lindsay, Prest.; Mary K. Lindsay, Secy.

W. Va., Cherry Run—Ferry.—Cherry Run & Big Pool Ferry Co. inctpd.; capital \$5000; J. N. Martin, E. J. Hasenbuehler, G. W. White.

Miscellaneous Factories.

Ala., Birmingham—Glass Products.—Birmingham Glass Mfg. Co. inctpd.; capital \$400,000; Sol. W. Quinn, Prest., New York; E. R. Ownes, Secy.-Treas., Birmingham; erect plant; mfr. bottles and other glassware; has tracts containing several million tons silica sand.

Ala., Tuscaloosa—Paint.—Emmet A. Jones Co., Birmingham; contemplates installing paint factory. (See Machinery Wanted—Paint Machinery.)

Ark., Little Rock—Work Clothes.—Miller Mfg. Co., 114 E. Markham St.; has 3-story-and-basement 140x70-ft. brick factory building; \$116,000; install additional mch.; double capacity; proposed weekly output 2000 doz. prs. overalls, shirts, trousers. (Supersedes recent item.)

D. C., Washington—Ice-Cream.—Carry Ice-Cream Co.; increase plant capacity.

Fla., Jacksonville—Medicine.—Re-Cu-Ma Medicine Co. inctpd.; capital \$30,000; W. Z. McElroy, Prest.; J. D. Boone, Secy.-Treas.

Fla., Miami—Ice Cream.—Miami Ice Cream & Dairy Co., 411 8th St.; erect 50x100-ft. concrete building; \$16,000; install ice-cream mch. and 15-ton ice plant; \$30,000; Howard Construction Co., Contr.; A. E. Lewis, Archt. (See Machinery Wanted—Boiler; Engine.)

Fla., Miami—Candy.—Ricardo Candy Co. incorporated; capital \$5000; B. P. Richards, Prest.; W. T. Shutt, Secy.-Treas.

Fla., St. Augustine—Awnings.—Wiles Bros., Ranson and E. A. Wiles, Jr.; rent part of building; equip to mfr. awnings.

Ga., Atlanta—Brushes.—Atlanta Brush Co. inctpd.; capital \$50,000; James B. Fitch, G. B. Snow; both Atlanta; Edward N. Chase, Concord, Mass.; establish plant to mfr. brushes.

Ga., Atlanta—Bakeries.—American Bakeries Co. inctpd.; capital \$600,000; J. F. Blodgett, W. H. Sutton, H. A. Binford.

Ga., Macon—Cakes.—Bak-A-Cake Mfg. Co. inctpd.; capital \$20,000; J. G. and W. C. Dorsett, L. B. Holleman.

Ky., Louisville—Standard Sanitary Mfg. Co., W. A. Wunderlich, Mgr., 319 W. Main St.; erect 1-story 150x75-ft. factory addition; brick and concrete construction; Joseph & Joseph, Archts., Atherton Bldg.; National Concrete Construction Co., Gen. Contr., Board of Trade Bldg. (Lately noted inviting bids.)

La., Bogalusa—Essential Oils.—Essential Oils Co., Philadelphia, Pa.; build large plant; mfr. essential oils from stumps and light woods; contracted for supply from cuttings of Great Southern Lumber Co.

La., Monroe—Carbon Plant.—Southern Carbon Co.; purchased 54-acre tract; erect branch carbon plant; plans \$500,000 extensions at present.

La., New Orleans—Corrugated Paper Boxes, Union Paper Products Co., Sam Ohnstein, Prest.; erect 1-story brick steel and frame factory building; \$112,743; utilize waste pine stumpage; mfr. corrugated paper boxes; Jos. Fromberg, Contr. (Lately noted organized to erect paper-box factory.)

La., New Orleans—Glass Mirrors, etc.—E. W. Ulrich Glass Co.; erect 2-story 100x50-ft. factory building; plate glass and copper front; \$10,000; mfr. mirrors and bevel glass; machinery purchased.

La., New Orleans—Trousers.—United Pants Mfg. Co., H. Bratman, Prest., 230 Charles St.; purchased building; remodel and equip to mfr. trousers.

La., Patterson—Beverages.—Eugene Poche; contemplates establishing beverage factory; install mch. (See Machinery Wanted—Bottling Machinery.)

Md., Baltimore—Folding Boxes, etc.—J. M. Raffel Co., Fairmount Ave.; acquired plant addition; double output.

Md., Baltimore—Enamels and Paints.—National Bituminous Enamel & Paint Corp., Lawrence and Harvey Sts.; erect first unit of 4-unit plant; total cost \$350,000.

Md., Baltimore—Tailoring.—Harrybill Tailoring Co., 110 E. Lexington St., inctpd.; capital \$10,000; Wm. B. Schreiber, Harry Y. Fishman, Morris Goldberg.

Mississippi—Turpentine, etc.—Standard Turpentine & Rosin Corp. organized; capital \$1,000,000; Prest., G. V. Ferguson, 19 W. 44th St.; Engr., John E. Teeple, 50 E. 41st St.; both New York; Henry L. Britain of New York and Birmingham and Wm. B. Ferguson of Philadelphia are interested; build plant; mfr. turpentine and rosin from waste pine wood; solvent process. (Lately noted chartered to mfr. pine products, etc.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Mo., Kansas City—Chewing Gum.—American Chicle Co., J. F. Bresnahan, V.-P., New York; erect plant.

Mo., Kansas City—Auto Tops.—Simon-Flynn Auto-Top Co.; occupy part of 2-story 118x75-ft. building to be erected by Wm. Lyons and Taubman Bros., owners, Lexington, Mo.

Mo., Kansas City—Syrup, etc.—Corn Products Refining Co., 17 Battery Pl., New York; J. J. Merrill, Gen. Mgr., Chicago; build plant to mfr. syrup and other corn products; erect 7 or 8 reinforced concrete buildings; 1 structure reported to contain 100,000 sq. ft. floor space; 75-acre site; use 25,000 bu. corn and 10,000,000 gals. water daily; drill well; understood to expend \$7,000,000 to \$8,000,000 for land, engineering, buildings, machinery, etc.

Mo., Kansas City—Macaroni.—Kansas City Macaroni Co., 401 Grand Ave.; erect 4-story and basement 100x50-ft. factory building; brick; stone trimmed; H. F. Brandenburger, Archt., 517 Massachusetts Bldg.; Patti-Moore Construction Co., Gen. Contr., Okmulgee, Okla. (Lately noted.)

Mo., St. Louis—Industrial Building.—J. W. Leigh, Archt., Odd Fellows Bldg.; erect 1-story factory building; brick; heavy mill.

Mo., St. Louis—Refinery.—St. Louis Sugar Refining Co. inceptd.; capital \$10,000,000; Wm. F. O'Keefe, Geo. G. Stiegler, E. E. Aberle, all Wilmington, Del. (Supersedes recent item.)

N. C., High Point—Loom Reeds.—Luther Reed Co., Fall River, Mass., and Pawtucket, R. I.; establish plant to mfr. loom reeds.

N. C., Lenoir—Tannery.—Caldwell Tanning Co. inceptd.; capital \$125,000; Jos. and A. M. Powell, A. G. Foard.

Okla., Oklahoma City—Batteries.—Westinghouse Battery Service Co. inceptd.; capital \$100,000; A. T. and E. O. Buening, E. Cook; all Guthrie, Okla.

Okla., Wilson—Oil Field Telegraph Co. inceptd.; capital \$10,000; Arch Clark, Wilson; A. T. West, Ardmore, Okla.; Arch Clark, Jr., Dallas, Tex.

Tenn., Knoxville—Medicine.—Scalf Medicine Co., LaFollette, Tenn., and Briscoe Bldg., Knoxville, inceptd.; capital \$100,000; C. A. Rosen, V.-P. and Sales Mgr.; secured 3-story 150x100-ft. reinforced building; establish branch plant; enlarge capacity.

Tenn., Memphis—Candy.—Queen Candy Mfg. Co., Linden Ave. and 4th St.; increased capital from \$5000 to \$100,000.

Tenn., Nashville—Ice-Cream.—Sidebottom Pure Ice-Cream & Dairy Co.; erect ice-cream plant.

Tex., Austin—Mattresses.—Chanway Mattress Factories, Ltd., Dallas, Tex.; establish branch plant; daily capacity 35 mattresses.

Tex., Houston—Bottling.—Eagle Bottling Works, 312 Scanlon Bldg., D. Canessa, Mgr.; erect \$16,000 to \$20,000 building; 1½-stories; 100x75 ft.; reinforced concrete; fireproof; bids until Oct. 15; install \$16,000 soda water and general bottling mech.; daily output 500 cases; Houston Construction Co., Constr. Engr. and Contr. Lately noted organized, capital \$100,000. (See Machinery Wanted—Bottling-plant)

Va., Hopewell—Paper and Fibrous Products, etc.—Hummell-Ross Fiber Corp. chartered; capital \$5,000,000; mfr. wood pulp, straw-board, paper and fibrous products. (Hummell & Downing Co., Milwaukee, Wis., lately noted purchased buildings equip to mfr. paper-board, etc.)

Va., Norfolk—Flags, etc.—United States Flag & Signal Co., 245 Bank St., organized; H. D. Greene, Supvr.; establish factory; equip to mfr. flags and signals.

Va., South Boston—Tobacco.—South Boston

Tobacco Co. inceptd.; capital \$120,000; T. E. Hodges, Prest.; A. M. Bendall, Secy.

Va., Woods' Cross Roads.—Gloucester Mercantile & Mfg. Co. inceptd.; capital \$10,000; Jas. H. Wilson, Prest.; Jno. H. Greene, Secy.

W. Va., Morgantown—Mirrors.—Ever-Bright Mirror Co. organized; A. J. Hamilton, Prest.; Earl Post, Secy.; Arthur C. Loran, Treas. and Gen. Mgr.; acquired Morgantown Broom Co.'s property and Arthur C. Loran's mirror factory; mfr. bent-glass mirrors. (Lately noted inceptd., capital \$50,000.)

W. Va., South Charleston—Chemicals.—Warner-Klipstein Chemical Co., J. Frank Bryan, Mgr.; rebuild burned bisulphide plant; loss \$10,000.

Motor Cars, Garages, Tires, Etc.

Ala., Andalusia—Garage.—Darling Motor Co.; erect 2-story garage.

Ala., Birmingham—Automobiles.—Steam & Gas Auto Co. inceptd.; capital \$5000; P. R. McCormack, Prest.-Treas.; J. J. O'Rourke, V.-P.; R. B. Watts, Secy.

Ala., Montgomery—Garage.—Montgomery Liberty Co. inceptd.; capital \$40,000; Walter J. Yost, Prest.; Chas. E. Wesenburgh, Secy.; Leo J. Trum, Treas.

D. C., Washington—Garage, etc.—Irvin Laughlin, 527 5th Ave., New York; erect 3-story and basement 175x100-ft. garage and laundry; J. R. Pope, Archt., 527 5th Ave., New York; W. F. Lipscomb, Gen. Contr., National Bank Bldg., Washington, D. C.

Fla., Daytona—Automobiles.—Green Sales Co. inceptd.; capital \$50,000; S. B. Green, Prest.; E. W. Green, V.-P.; R. C. Green, Secy.-Treas.

Fla., Daytona—Garage.—Wm. Goldenburg; erect \$75,000 garage; 76 ft. front, 140 ft. rear, 200 ft. deep; tile walls, steel trusses; built-up composition roofing; cement floors; light from city; install electric elevator for automobiles; bids about Aug. 27; Fuquay & Gheen, Archts., Daytona Beach, Fla. (See Machinery Wanted—Building Material.)

Fla., Jacksonville—Motors.—Reo-Varn Motor Co. inceptd.; capital \$200,000; G. W. Varn, Prest.; W. L. Varn, V.-P.; I. J. Smoot, Secy.-Treas.

Fla., Orlando—Automobiles.—Lott Motor Car Co. inceptd.; capital \$50,000; E. W. Lott, Prest.; W. D. Driver, V.-P.; E. D. Bedenbaugh, Secy.-Treas.

Fla., Tampa—Garage.—Oscar Daniels, Contractor; erect garage and showroom; purchased 100-ft. frontage.

Ga., Atlanta—Automobiles.—McNeel-Boykin Motor Co. organized; capital \$75,000; M. L. McNeel, Sr., E. E. McNeel; both Atlanta, Ga.; J. M. Boykin, Jacksonville, Fla.

Ga., Atlanta—Garage.—John W. Grant; erect garage; 1 story and basement; reinforced concrete; \$60,000; W. H. George, Contr.

Ga., Atlanta—Garage.—Georgian Terrace Garage inceptd.; capital \$10,000; J. L. Hicks, M. J. Lane, E. L. Douglas.

Ga., Atlanta—Automobiles.—Wm. A. Estaver Sales Co. organized; capital \$50,000; S. K. Cowan, Atlanta; Wm. A. Estaver, Duval County, Fla.; F. E. Bradfield, Scott County, Iowa.

Ga., Atlanta—Tires.—Unecda Tire Co. organized; capital \$5000; J. R. Jones, E. G. Hodges.

Ga., Atlanta—Automobiles.—Rutland Motor Sales Co. organized; capital \$30,000; J. C. Oliver, Guy W. Rutland, S. J. Slate.

Ga., Macon—Motor Trucks.—Crump Motor Truck Co. inceptd.; capital \$5000; A. B. Crump, L. E. Thomas, C. A. Allen.

Ky., Covington—Garage.—Wm. B. Floyd, 500 Madison Ave.; erect 1-story, L-shaped, 65x45x16-ft. garage; R. E. Culbertson, Contr., 900 Scott St.

La., New Orleans—Automobile Tires.—Standard Rubber Co. inceptd.; capital \$5,000,000; L. C. St. Germain, Prest., Breaux Bridge, La.; J. W. Olivier, Treas., Arnaudville, La.; I. J. McGee, Secy., New Orleans; erect plant to mfr. pneumatic puncture-proof automobile tires; daily output 1000.

Md., Baltimore—Garage.—Millard Fillmore Carter, Edmonson and Melvin Aves.; erect two 1-story public garages; \$10,000.

Md., Baltimore—Garage.—H. N. Smith, 2300 N. Calvert St.; erect 1-story 45x100-ft. garage; John R. Forsythe, Archt., 232 St. Paul St.

Mo., Kansas City—Automobiles.—R. P. Rice Motor Sales Co., 3223 Broadway Ave.; erect automobile salesrooms; 3-story and basement; 122x60 ft.; terra-cotta and glass facade; 208-ft. frontage; Smith, Rea & Lovitt, Archts., 602 Finance Bldg.; A. J. Rector, Gen. Contr., 207 Dwight Bldg.

Mo., Kansas City—Automobiles.—Lilley Motor Co., 26th and Walnut Sts.; erect automobile salesrooms; 1-story and basement, L-shaped, 130x60x50x40-ft. building; W. B. Weaver, Gen. Contr., 304 Commerce Bldg.

Mo., Kansas City—Garage.—Lester & Barrell, 1612 Benton Blvd.; erect 1-story and basement 115x100-ft. garage; brick; stone trimmings; composition roofing; H. D. Pampel, Archt., 404 Finance Bldg.; Globe Wrecking Co., Gen. Contr., 1048 Union Ave. (Lately noted erect garage.)

Okla., Purcell—Automobiles.—Slead Motor Co. inceptd.; capital \$25,000; W. A. Slead, Purcell; Howard and K. Roberts; both Oklahoma City.

Okla., Tulsa—Garage.—Mideo Super-Service Supply & Garage Co. inceptd.; capital \$30,000; J. M. McDonald, E. S. Richardson, Otto D. Bierhauser.

S. C., Columbia—Garage.—Erickson-Staples Co. inceptd.; capital \$15,000; W. K. McDowell, Prest.; J. H. Staples, V.-P.; E. L. Erickson, Secy.-Treas.

Tenn., Memphis—Tires.—Drake Motor & Tire Mfg. Corp., 2 Lee Bldg., chartered; W. F. Drake, Prest.-Gen. Mgr.; H. R. Vaughan, V.-P.; Fred W. Vaughan, Secy.-Treas.

Tenn., Knoxville—Garage.—E. C. Briscoe Motor Co.; erect \$150,000 fireproof concrete garage.

Tex., Center—Automobiles.—Smith Motor Co. organized; Tol. T. Smith, Prest.-Mgr.; W. L. Davis, V.-P.; W. I. Powell, Secy.; erect \$50,000 building; 80x150 ft.; brick; N. O. Thomas, Contr., Center; Jones & Tabor, Archts., Houston, Tex. (Lately noted inceptd., capital \$50,000.)

Tex., Dallas—Garage.—American Automotive School, Arthur Stevenson, Mgr., 101 N. Haskell Ave.; erect 75x100-ft. building; ordinary construction; \$10,000; Clem Lumber Co., Contr.; J. R. Krone, Const. Engr. Lately noted to construct garage and workshop. (See Machinery Wanted—Vulcanizing Equipment.)

Tex., Orange—Automobiles.—Frey Auto Co. inceptd.; capital \$28,000; Wm. Gunstream, Prest.; L. A. Frey, V.-P.; G. E. Bosseman, Secy.-Treas.; erect building.

Tex., Rusk—Motor.—Walker Motor Co. inceptd.; capital \$5000; W. R. Walker, T. H. Cobble, J. I. Perkins, Jr.

Tex., Waco—Garage, etc.—Bacon-Williams Co.; construct garage and filling station; \$10,000.

Va., Cape Charles—Garage.—F. C. Flitzhugh; erect 1-story 125x78-ft. garage; Diehl & Vance, Archts., New Monroe Bldg., Norfolk, Va.

Railway Shops, Terminals, Roundhouses, Etc.

Ga., Waycross.—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C.; remodel and enlarge yards one-third present size; \$70,000; install \$75,000 machinery; rebuild car sheds; \$80,000; install septic tanks; \$1500.

Okla., Oklahoma City.—Missouri, Kansas & Texas Ry., F. H. Ringer, Ch. Engr., St. Louis, Mo.; erect 100-ft. turntable, 8-stall roundhouse, machine shop and power plant, boiler-washing plant, etc.; contract for 300-ton reinforced concrete coaling plant to Roberts & Schaefer Co., Chicago; 100,000 gals. capacity steel combination water tank and softener to Graver Corp. (Wm. Graver Tank Works), Chicago. (Lately noted.)

Tex., El Paso.—Texas & Pacific Ry., E. F. Mitchell, Ch. Engr., Dallas, Tex.; erect roundhouse and shops; rebuild bridges; \$1,000,000.

Road and Street Construction.

Ark., Eudora.—Sidewalk Improvement Dist. No. 2 Comms., E. T. Cashion, Secy.; pave 82,510 sq. ft. concrete sidewalks; bids until Aug. 30. (See Machinery Wanted—Paving.)

Ark., Pine Bluff.—Comms. Roberts Road Improvement Dist., Jefferson and Arkansas Counties, E. B. Stokes, Humphrey, Ark.; construct 6½ mi. gravel-surfaced road from Humphrey to Lonoke County line; bids until Aug. 20; Moreland & Bennett, Engrs., Pine Bluff, Ark. (See Machinery Wanted—Road Construction.)

Fla., Fort Myers.—City, Jno. W. Owens, Clerk; construct 25,745 sq. yds. pavement on Oak, Hendry, Monroe and 1st Sts.; asphalt block; stone foundation; \$77,000; J. A. Davidson & Son, Engrs., Fort Myers; Jas. G. Yeats Co., Contr., Port Tampa, Fla. (Lately noted bids until Aug. 5.)

La., Opelousas.—City Comsn.; plans street paving, drainage, etc.; \$500,000; contemplated. Address The Mayor.

Fla., Fort Myers.—Lee County Comms., W. S. Turner, Commr., Captiva, Fla.; construct 9-ft. shell road; 5250 cu. yds. shell; \$12,000 available; bids until Sept. 8; changed date from Aug. 9; R. P. Ransom, Engr., Fort Myers, Fla. (See Machinery Wanted—Road Construction.)

Fla., Miami Beach.—Miami Beach Bay Shore Co.; construct road on mid-golf development project; Freeland Construction & Supply Co., Contr.

Fla., Manatee.—Manatee County Comms.; construct hard-surfaced road from Manatee to De Soto County line; vote Sept. 7 on \$200,000 bonds; Maj. Brown, Engr., State Highway Comsn.

Fla., Okeechobee.—City, W. W. Dunncliff, Clk.; construct 10 mi. street; broken stone with bituminous surface; \$200,000 available; W. B. Clay, Engr.; J. E. Nash, Contr. (Lately noted contract let.)

Ga., Athens.—Clarke County Comms.; construct 5.5 mi. hard-surfaced roads; \$160,000 available; R. T. Goodwyn, Jr., Div. Engr., State Highway Dept.

Ky., Louisville.—Board Public Works, Thos. B. Crutcher, Chrmn.; repair and construct streets; \$30,000 to \$50,000.

Ky., Poor Fork.—Town Board, Ira Fields, Clk.; construct 4870 lin. ft. sidewalk; bids until Aug. 25 (See Machinery Wanted—Paving.)

La., Bunkie.—City; construct pavements; extend water mains; voted bonds. Address The Mayor.

Md., Baltimore.—City; repair roads at Loch Raven; bids until Aug. 18; Wm. A. Megraw,

Water Engr. (See Machinery Wanted—Road Construction.)

Md., Frederick.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct ¼ mi. concrete improved road from Pennsylvania Ry. crossing to Carroll Creek; \$14,805; M. J. Grove Lime Co., Contr.

Md., Frederick.—Frederick County Comms., Eugene H. Albaugh, Clk.; resurface 1.52 mi. road from Monrovia toward Hyattsville; stone; Frederick County, Contract 447; bids until Aug. 27. (See Machinery Wanted—Road Construction.)

Md., Snow Hill.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct .19 mi. State Highway; Worcester County, Contract WO-22; .31 mi. State Highway through Pocomoke; Worcester County, Contract WO-21; bids until Aug. 24. Lately noted bids until July 28. (See Machinery Wanted—Road Construction.)

Miss., Hooker.—Great Southern Lumber Co., J. H. Cassidy, Asst. Gen. Mgr., Bogalusa, La.; construct 5 mi. log road; 80,000 cu. yds. earth; 3000 drain boxes; 25,000 cu. yds. overhaul, etc.; bids until Aug. 16. (See Machinery Wanted—Road Construction.)

Miss., Meridian.—City; pave Twenty-fourth Ave.; \$290,000 bonds. Address The Mayor.

Miss., Moss Point.—City; pave Main St. between Robinson and Welch Sts.; vote on \$10,000 bonds; contemplated. Address The Mayor.

Miss., Poplarville.—Pearl River County Supervisors; construct 13½ mi. hard surface over Jackson Highway from Poplarville to Lumberton; \$100,000; Xavier A. Kramer, State Highway Engr., Jackson, Miss.; Arthur Ball, Contr., Columbia, Miss. (Lately noted bids until Aug. 4.)

Miss., Tchula.—City; improve streets; voted \$10,000 bonds. Address The Mayor.

Mo., Carthage.—Jasper County Comms.; construct 13 mi. gravel road between Carthage and Avilla; \$5000 per mi.; ask State and Federal aid. H. P. Moberly, Div. Engr.

Mo., Carthage.—Jasper County Comms.; construct 2.76 mi. Joplin-Carthage road; Federal-aid Project 81; \$85,466; 9033 cu. yds. excavation; 29,259 sq. yds. concrete; Carterville Construction Co., Contr., Carterville, Mo. (Bids previously noted.)

Mo., Carthage.—City; construct 59,000 sq. yds. concrete paving; 25,000 sq. yds. macadam paving; \$220,000 available; Carterville Construction Co., Contr., Carterville, Mo.; F. B. Newton, Engr., Carthage, Mo.

N. C., Hertford.—Perquimans County Commissioners; hard-surface 15 mi. highways; issue \$300,000 bonds; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

N. C., Rocky Mount.—City; pave 7½ mi. streets; voted \$650,000 bonds. Address The Mayor.

Okla., Kingfisher.—State Highway Board, Oklahoma City, Okla.; construct 1.38 mi. concrete road in Kingfisher County; \$58,797.50; Gibson & Mitchell, Contrs., Pauls Valley, Okla.; Robert C. Terrell, State Highway Engr., Oklahoma City. (Lately noted inviting bids.)

Okla., Lawton.—State Highway Board, Oklahoma City, Okla.; construct 6 mi. gravel road in Comanche County; \$73,401.65; Allen & Harrison, Contrs., Oklahoma City; Robert C. Terrell, State Highway Engr., Oklahoma City. (Lately noted inviting bids.)

Okla., Oklahoma City.—State Board of Public Affairs, Geo. F. Clark, Chrmn.; pave Capitol Sq.; Western Paving Co., Contr.; plans by Geo. H. Kessler; E. T. Colt, Engr. for State Board Public Affairs, Supvr. Constr. (Lately noted.)

S. C., Columbia.—Richland County Comms.;

construct 20 mi. Saluda road; \$123,000; White & Simpson, Contrs., Chatham, Va.

S. C., St. Matthews.—Town, J. L. Carroll, Mayor; improve highway; 16,128 sq. yds. surfacing, with cement concrete, asphaltic concrete or sheet asphalt, both of latter on cement-concrete base; 5800 lin. ft. combination concrete curb and gutter; 4000 cu. yds. excavation; 1200 lin. ft. 18-in. storm drain; bids until Aug. 25. (See Machinery Wanted—Paving.)

S. C., Union.—Union County Highway Commission, Cross Keys Township; grade, drain and surface with topsoil 3.50 mi. Union-Laurens road; \$24,000; Kennedy & Owens, Contrs.; W. B. Deneen, Engr. (Lately noted inviting bids.)

S. C., Union.—Union County Highway Commission, Union Township; grade, drain and surface with topsoil 3.75 mi. Union-Laurens road; \$23,000; Elliott & Sons, Contrs., Spartanburg, S. C.; W. B. Deneen, Engr., Union, S. C. (Lately noted inviting bids.)

Tenn., Benton.—Polk County Comms.; construct 2 highways; voted \$200,000 bonds.

Tenn., Jackson.—City, J. D. Johnson, Mayor; improve streets and water-works; extend sewer system, etc.; voted \$151,000 bonds.

Tex., Fort Worth.—Tarrant County, W. E. Yancy, Auditor; construct 5857 mi. State Highway No. 1, known as Bankhead Highway; drainage structures and bridges; bids until Aug. 14. Lately noted bids until July 1. (See Machinery Wanted—Road Construction.)

Tex., Groesbeck.—Limestone County Commissioners, J. E. Bradley, Judge; construct 23.3 mi. State Highway 14; gravel macadam; concrete and steel drainage structures; \$330,000 available; Tibbetts Construction Co., Contr., Mineral Wells, Tex.; Fred P. Holt, Engr., Groesbeck, Tex. Lately noted inviting bids. (See Machinery Wanted—Conveying Machine.)

Tex., Junction.—Kimble County Comms.; construct 22 mi. road from Junction to Mason County line; contract let.

Tex., Richmond.—Fort Bend County, C. H. Chernosky, Judge; grade and drain 13.01 mi. highway from Roseberg to Austin county line; \$70,318; M. M. Craven, Contr., Bellair, Tex. (Bids previously noted.)

Tex., Snyder.—City; pave streets; 13,400 sq. yds. gravel surfacing; 1100 lin. ft. curb; 3850 sq. ft. sidewalk; bids opened Aug. 10; Henry Exall Elrod, Engr., 220 Interurban Bldg., Dallas.

Tex., Van Horn.—Culberson County; improve 66,523 mi. highways; \$146,974; W. E. Hamilton, Contr., Mineral Wells, Tex.

Tex., Wichita Falls.—Wichita County; improve 8.81 mi. highway, Federal-aid Project No. 3; 4.68 mi. Highway No. 3, Federal-aid Project No. 61; concrete; Potts & Prentice, Contrs.; \$648,845.

W. Va., Logan.—City; construct 4-mi. road; H. J. Spelman, Div. Road Engr., Logan; C. E. Price, Contr., Huntington, W. Va.

W. Va., Logan.—Logan County Comms., Don Chaffin, Clk.; grade and drain 3.7 mi. road from Logan to Lincoln County line; \$86,539.40; C. E. Price, Contr., Huntington, W. Va.

W. Va., Moundsville.—Marshall County Commissioners; grade and drain 3 mi. Cameron-Poplar Springs road; N. M. Leigh, Contr., Mannington, W. Va. (Bids lately noted.)

W. Va., Morgantown.—Monongalia County Court, John M. Gregg, Clk.; grade 5000 ft. road from Ky. station at Monon to Burchfield Run Rd.; place 600 ft. tile or corrugated iron culvert pipe; bids until Aug. 24. (See Machinery Wanted—Road Construction.)

W. Va., Princeton.—Mercer County Comms.,

Lowery G. Bowling, Clk.; awarded road contracts; G. W. Mays, Bluefield, W. Va., \$7790, 1 mi. earth road; R. F. Baker, Princeton, \$15,450, 2 mi. Duhring-Goodwell road; shale; Elmer C. Barton County Road Engr. McNutt Bldg., Princeton. (Lately noted inviting bids.)

Sewer Construction.

Ky., Louisville.—Board Public Works, Thos. B. Crutcher, Chrmn.; construct sewers; \$80,000.

Md., Aberdeen.—City; install sewer and water systems; voted \$100,000 bonds. Address The Mayor. (Lately noted.)

N. C., Rocky Mount.—City; extend sewer system; 26,500 ft.; issue \$150,000 bonds. Address The Mayor.

Okla., Erick.—City, J. A. Richardson, Mgr.; install sewer system; enlarge water-works and electric-light plant; \$120,000.

Tenn., Jackson.—City, J. D. Johnson, Mayor; extend sewer system; voted \$5000 bonds. (Lately noted.)

Tenn., Jackson.—City, J. D. Johnson, Mayor; extend sewer and water mains; voted \$5000 bonds. (Lately noted.)

Shipbuilding Plants.

Fla., Jacksonville.—Concrete Steamers and Oil Tankers.—Newport Shipbuilding Co., R. H. Arnold, Gen. Mgr., Washington, D. C.; establish shipyard; contemplated.

Telephone Systems.

S. C., Georgetown.—Home Telephone Co.; increase capital from \$16,000 to \$50,000.

Textile Mills.

Ga., Atlanta.—Cotton Cloth.—Banning Cotton Mills inceptd.; A. G. Couch, George Beveridge.

N. C., Lexington — Cotton Products. — Er-langer Cotton Mills; erect 100x50-ft. mill construction clothroom building; sprinkled and heated; J. E. Sirrine & Co., Archts.-Engrs., Greenville, S. C.

N. C., Mt. Holly.—Yarns.—Nims Mfg. Co.; increased capital to \$350,000.

N. C., Mt. Holly.—Combed Yarns.—Adrian Mfg. Co.; increased capital from \$225,000 to \$675,000.

N. C., Salisbury.—Bleachery.—Yadkin Finish-ing Co.; extend plant; erect 100x50-ft. standard mill-construction addition; sprinkled and heated; J. E. Sirrine & Co., Archts.-Engrs., Greenville, S. C. (Lately noted to improve and enlarge bleachery.)

S. C., Newry.—Print Cloths.—Courtenay Mfg. Co.; plans increasing capital to \$1,500,000.

S. C., Spartanburg.—Hosiery.—Calton Hosiery Mills, C. L. O'Neill, Secy.-Treas.; enlarge plant; install finishing dept.

Tex., Sherman.—Duck.—Sherman Mfg. Co.; erect 2-story 80x30-ft. waste plant; reinforced concrete; sprinkled and heated; J. E. Sirrine & Co., Archts.-Engrs., Greenville, S. C.

W. Va., Wheeling — Indigo Prints and Drills.—J. L. Stifel & Sons, 4th and Main Sts.; erect \$75,000 factory addition; R. R. Kitchen Co., Gen. Contr., Natl. Bank Bldg.

Water-Works.

La., Bunkie.—City; extend water mains; construct pavements; voted bonds. Address The Mayor.

Md., Aberdeen.—City; install water and sewer systems; voted \$100,000 bonds. Address The Mayor.

Miss., Oxford.—City; repair, remodel and

improve water-works and light plant; vote

Aug. 27 on bond issue. Address The Mayor.

Okla., El Reno.—City; improve water-works; Merkle Mch. Co., Contr., 408 Interstate Bldg., Kansas City, Mo.

Okla., Erick.—City, J. A. Robinson, Mgr.; enlarge water-works and electric-light plant; install sewer system; \$120,000.

Tenn., Jackson.—City, J. D. Johnson, Mayor; improve water-works; voted \$15,000 bonds. (Lately noted.)

Tenn., Jackson.—City, J. D. Johnson, Mayor; improve water-works; voted \$15,000 bonds; extend water and sewer mains; voted \$5000 bonds. (Lately noted.)

Tex., Alpine.—City, B. F. Gerkeley, Mayor; plans \$20,000 water-works; Bartlett & Raney, Engrs., Moore Bldg., San Antonio. (Lately noted.)

Va., Norfolk.—Walter H. Taylor, 3d, Director of Public Works; construct pumphouse, dam and road diversions; 150,000 cu. yds. excavation; 3500 cu. yds. reinforced concrete; 13,000 ft. sheet piling; bids until Aug. 30; Dabney H. Maury, Conslt. Engr., 1445 Monadnock Block, Chicago. (See Machinery Wanted—Water-works, etc.)

Woodworking Plants.

Fla., Dunedin.—Cigar Boxes.—M. W. Moore; erect 1-story, 24x56-ft. plant; \$2000; wood floors; corrugated-iron roof and sides; electric lights; install equipment to mfce. cigar boxes; \$2500; F. W. Beers, Archt.

Fla., Jacksonville.—Caskets.—W. P. Richardson Co.; remodel plant; \$10,000.

Ky., Louisville.—Wagons.—Kentucky Wagon Mfg. Co.; improve plant; double size and capacity.

La., Baton Rouge.—ash, Doors, etc.—Baton Rouge Sash & Door Works inceptd.; capital \$40,000; E. J. Bajon, Lee O. Lester, O. H. Junot.

La., Bunkie.—Staves.—Business League; establish stave mfg. plant.

Miss., Natchez.—Staves.—Ripley Stave Co.; erect \$50,000 plant.

Va., Messick.—Cooperage, etc.—York Cooper-age & Lumber Co. organized; C. P. Amory, Prest., Winchester, Va.; H. Topping, V.-P., L. D. Amory, Secy.-Treas.; W. H. Amory, Mgr.; each Messick; erect stave and sawmill sheds; ordinary mill construction. (Lately noted)

Fire Damage.

Ala., Orrville.—Berry-Reeves Lumber Co.'s drykilns and planing mill; loss \$40,000.

Ark., Conway.—W. F. Whiddon's residence; loss \$10,000.

Ga., Atlanta.—C. G. Nolan's grocery and meat store, Chapel and West Fair Sts.

Ga., Augusta.—Jacob Grusin's residence, Mill-ledgeville Rd., near Augusta; loss \$13,000.

Md., Baltimore.—City's hay shed, Lake Roland; Wm. F. Broening, Mayor, City Hall.

Md., Braddock Heights. — G. Lawrence Cramer's residence.

Mo., Chadwick.—J. M. Jernigan's restaurant; John Boles' restaurant; Louis Nichols' barber shop; Ike Workman's office; John Rowles' residence; Landers Lumber Co.'s shed; total loss \$56,000.

Okla., Granite.—Farmers' Co-operative Elevator Co.'s grain elevator; loss \$20,000.

S. C., Charleston.—Storage sheds Nos. 7 and 8 of army supply base, Col. Ralph T. Ellis, Commandant.

Tenn., Dyersburg.—Fork Deer Milling Co.'s warehouse; \$12,000.

Tex., Albany. — Reynolds Presbyterian Orphanage dormitory.

Va., Ocean View.—Farmhouse, near Ocean View, of L. H. Seeley, Norfolk.

W. Va., South Charleston. — Warner-Klipstein Chemical Co.'s bi-sulphide building; loss \$10,000.

BUILDING NEWS

EXPLANATORY.

Buildings costing less than \$10,000 not covered in these reports.

BUILDINGS PROPOSED

Apartment-Houses.

Ala., Birmingham. — Mrs. W. B. Thomas; erect \$10,000 apartment-house, Tuscaloosa Ave.; 2 stories; frame.

N. C., Lexington.—Misses Hedrick; erect 12-room twin apartment-house, W. Center St.

Association and Fraternal.

Ky., Blackey.—Consolidated Fuel Co.; erect Y. M. C. A. building, Rockhouse. (See Dwellings.)

Ky., Blackey.—Elk Creek Coal Co.; erect Y. M. C. A. building. (See Dwellings.)

Ky., Sergeant.—Apex Coal Co.; erect Y. M. C. A. building. (See Churches.)

Mo., Columbia.—Boone County Post, American Legion; plans to erect \$200,000 community-center house.

S. C., Catechee.—Norris Cotton Mills; erect Y. M. C. A. building. (See Warehouses.)

Tenn., Memphis.—Carpenters' Union, 95 S. 2d St., R. L. Smith, Prest.; erect \$50,000 temple; 54x100 ft.; 3 stories; reinforced concrete and brick; tar and gravel roof; concrete and wood floors; city lights; hollow fireproof tile; plans by Estes-Williams-Ragsdale Co., Constr. Engrs. (Lately noted.)

Tenn., Memphis.—Carpenters' Union, R. L. Smith, Prest.; form stock company to erect home, 212 N. 2d St.; \$75,000 capital; 3 stories; 51x100 ft.; brick and reinforced concrete; first floor, storerooms; upper floors, assembly-rooms, offices, etc.; plans by Estes, Williams, Ragsdale Co., Constr. Engrs.

Tex., Bay City.—Post No. 11, American Legion, W. S. Holman, W. E. Ehler and others, Bldg. Comm.; erect \$50,000 home, Avenue F and 8th St.; auditorium, natatorium, gymnasium, reading-rooms, etc.

Tex., Fort Worth. — Knights of Pythias; erect \$28,000 building, 3d and Main Sts.; 3 stories; brick; 25x110 ft.; storage-room, 1st floor; club, 2d; hall, 3d.

Ky., Hopkinsville.—Salvation Army; remodel building; \$15,000; 3 stories; brick; J. T. Waller, Archt.

Va., Bristol.—James C. Brewer Post; erect clubhouse, Island Park.

W. Va., Martinsburg.—Equality Lodge No. 74, A. F. and A. M.; plans to erect temple.

Bank and Office.

Ala., Birmingham.—Birmingham Ice & Cold Storage Co., J. Frank Rushton, Prest.; plans

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

to erect \$50,000 office building, 22d St. and Fifth Ave. South.

Ga., Savannah.—Realty Investment Co.; remodel bank building, Drayton and Bryan Sts.

N. C., Greensboro.—American Exchange Natl. Bank; remodel building for branch; limestone front; install banking fixtures, vaults, safety-deposit boxes, etc.; Raleigh James Hughes, Archt. (Lately noted.)

N. C., Greensboro.—American Exchange National Bank; remodel building; 25x100 ft.; limestone front; metal roof; wood and tile floors; steam heat; electric lights; install banking fixtures, vaults, safety-deposit boxes, etc. Address Raleigh James Hughes, Archt. (Lately noted.)

S. C., Florence.—Dargan-Harlee Realty & Development Co.; purchased site facing W. Evans St.; erect 3-story office building; foundations to support additional stories.

Tex., San Antonio.—Republic Realty Co.; erect 7th-story addition to building on Ave. C; \$28,000; concrete and tile.

Tex., San Antonio.—Beverly W. Spillman; preparing plans for \$40,000 to \$50,000 bank building.

Tex., Uvalde.—Beverly W. Spillman, San Antonio; preparing plans for \$10,000 dental office.

W. Va., Clarksburg.—Empire Natl. Bank, V. L. Highland, Prest.; will not erect addition at present. (Lately noted.)

Churches.

Ala., Birmingham.—Friendship Baptist Church, Rev. M. A. McEwen, Pastor; erect \$55,000 building; 60x100 ft.; brick; tar and gravel roof; pine floors; electric lights; heating plant, \$1000; W. A. Rayfield & Co., Archts.

Ala., East Florence.—Baptist Church, Rev. T. M. Byron, Pastor; erect \$15,000 brick building.

Ala., Gadsden.—Episcopal Church, Rev. E. C. Seaman, Rector; erect rectory, 9th St.

Ala., Gadsden.—First Christian Church; erect \$50,000 building, 10th St. and Forest Ave. Address The Pastor.

Ala., Gadsden.—First Baptist Church; erect building, Chestnut and 8th Sts. Address The Pastor.

Fla., Miami.—First Christian Church; erect \$50,000 building, 8th St.

Fla., West Tampa.—B. C. Bonfoey; preparing plans for \$25,000 Methodist Mission building; 3 stories; brick; 50x50 ft.

Ky., Blackey.—Elk Creek Coal Co.; erect church. (See Dwellings.)

Ky., Blackey.—Consolidated Fuel Co.; erect church, Rockhouse. (See Dwellings.)

Ky., Cronona.—Elkhorn Coal Corp.; erect church and school building, Haymond.

Ky., Sergeant.—Apex Coal Co.; erect church, Y. M. C. A. and school buildings; also construct tippie.

Md., Crisfield.—Asbury M. E. Church, Rev. W. C. Cochran, Pastor; erect \$75,000 church and Sunday-school building; 2 stories; 80x160 ft.; stone; Geo. E. Savage, Archt., Wither-spoon Bldg., Philadelphia.

Md., Leonardtown.—St. Aloysius Church, Rev. J. W. Casey, Pastor; erect \$50,000 guild hall; 1 story and basement; 132x47 ft.; reinforced concrete; J. W. Kerney, Archt., Davidson Bldg., Washington, D. C.

Mo., Frankenstein.—Our Lady of Help Catholic Church, Rev. A. Nicoles, Pastor; erect \$35,000 church and parsonage; 1 story; 52x200 ft.; limestone; Ludwig & Dreisoerner, Archts., 1736 Waverly Bldg., St. Louis; builds by day work.

Mo., St. Louis.—C. F. May, Merchants'

Laclede Bank; preparing plans for \$17,000 brick church, 1st St., near Hi Pointe.

N. C., Hollis.—P. D. Withrow, Rutherford-ton, N. C.; erect Methodist Church, 60x60 ft.; cross-shaped.

N. C., Sanford.—Baptist Church; erect building. Address The Pastor.

Okla., Tulsa.—Orcutt Memorial Church, Rev. L. L. Brannon, Pastor; W. H. Siders, Chrmn. Bldg. Comm.; erect \$100,000 building, 15th and Quaker Sts.; brick; gray granite trim; tile roof; 3 stories and basement; auditorium, gymnasium, Sunday-school rooms, etc.; Butler & Sanders, Archts.

Tex., Brenham.—Fourth Street M. E. Church; erect parsonage; about \$10,000. Address The Pastor.

Tex., Del Rio.—St. James' Episcopal Church; erect \$30,000 building; 2 stories; Gothic type; stone, with cut-stone trim; yellow-pine floors; tile roof; hot-air heat; electric lights; Harrington Co., Archt. and Engr.; contract in about 3 weeks. Address St. James Church.

Tex., Dilworth.—Catholic Church; erect building; Rev. Dr. Huebsch, Gonzales, Tex., interested.

Tex., Freeport.—Freeport Catholic Church, C. J. Reiner interested; erect \$20,000 building, Main St.; 40x70 ft.; asbestos shingle roof; pine floors; heating plant, \$800; electric lights; W. A. Rayfield & Co., Archts., Birmingham, Ala.; day labor.

W. Va., Charleston.—Ebenezer Baptist Church; contemplates erecting 2-story building; 28x70 ft.; Jas. L. Montgomery, Archt.; plans not started.

City and County.

La., New Orleans.—Freight Shed.—Board of Comms., Port of New Orleans, W. O. Hudson, Prest., 200 New Court Bldg.; bids until Aug. 31 to furnish or furnish and erect structural steel for Poydras St. freight shed extension; plans and specifications at office Arsene Perillat, Chief Engr. (Lately noted.)

La., Shreveport.—Library, etc.—City; votes Sept. 14 on \$1,250,000 bonds, including courthouse and jail, \$200,000; central and suburban fire station, \$200,000; fire-alarm system, \$25,000; public library, \$265,000. Address Mayor Ford.

Mo., Holden.—City Hall.—City Comms.; considering erecting \$30,000 city hall.

Mo., St. Louis.—Morgue.—City, Harland Bartholomew, Engr. of City Plan Comsn.; erect \$68,000 morgue.

W. Va., Charleston.—Administration Building.—City, B. H. Hill, Mgr.; erect \$500,000 administration building, Virginia St.; J. R. Warne, Archt., Masonic Temple.

Courthouses.

La., Shreveport.—City; votes Sept. 14 on \$1,250,000 bonds, including courthouse and jail, \$200,000. (See City and County.)

Dwellings.

Ala., Anniston.—Southern Manganese Land Co., Theodore Swann, Prest.; C. M. Jasper-son, secy.; erect number cottages.

D. C., Chevy Chase.—Speiden & Speiden, 1403 New York Ave., Washington; preparing plans for frame residence; 2 stories, attic and cellar.

D. C., Washington.—D. C. Phillips; erect addition to residence, 21st and Q Sts. N. W.; 3 stories; brick and stone; McKim, Mead & White, Archts., 101 Park Ave., New York.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W.; erect 10 dwellings and garages, 751-69 Princeton Pl. N. W.; \$50,000; 2 stories;

brick; 9 rooms; tin roof; oak and pine hardwood floors; ultimate plans call for 135 dwellings. (Lately noted.)

Fla., Bradentown.—J. K. Singeltary, Kissimmee, Fla.; erect 3 bungalows; C. L. Price, Bradentown, in charge of construction and purchasing material. (Lately noted.)

Fla., Daytona.—Senator L. Y. Sherman, Springfield, Ill.; reported to erect \$20,000 residence.

Fla., Jacksonville.—Hill Investment Co.; erect residence, Herschell St., between Barrs and King Sts.; about \$10,000.

Fla., Miami.—W. G. and John H. Bullen; erect \$20,000 residence, Cascade Ave. and Bay St.; concrete block; Italian and Spanish type.

Fla., Orlando.—L. C. Massey, Prest. State Bank of Orlando; erect residence, Lucerne Terrace.

Fla., St. Petersburg.—J. B. Robinson, F. C. Carley, Harold Sommers, W. S. Shull, Byrd Latham, Guy Sheppard and D. E. Beach; each erect residence, West Central Ave.; 2 stories; 6 rooms; W. S. Shull, Archt.

Ga., Savannah.—J. E. Brantley; erect 2-story frame dwelling, E. 45th St.

Ga., Savannah.—Allan Artley; erect 2-story frame dwelling, E. 44th St.

Ky., Blackey.—Elk Creek Coal Co.; erect 50 miners' dwellings, coal tippie, Y. M. C. A. building and church.

Ky., Blackey.—Consolidated Fuel Co.; erect 50 miners' dwellings, Rockhouse; also Y. M. C. A. church and school buildings; construct tippie.

Ky., Owensboro.—R. E. Massie; erect residence; 2 stories and basement; 58x50 ft.; frame; C. W. Kimberlin, Archt., Odd Fellows Bldg.

Ky., Whitesburg.—Center Bros. Coal Co.; erect 10 miners' dwellings.

La., Bastrop.—Ouchita Valley Glass Co.; erect 50 employees' dwellings.

La., New Orleans.—Masterbilt Homes, Inc., E. W. Ulrich, Mgr.; erect 5 bungalows.

Mo., Kansas City.—W. P. Hovey & Son, 706 Sharp Bldg.; erect \$10,000 residence, 4601 Charlotte St.; 2 stories and basement; 30x47 ft.; brick veneer ad frame; shingle roof; also \$10,000 residence, 4522 Campbell St.; 2 stories and basement; 68x28 ft.; stone, veneer and frame; shingle roof; Alice Walton, Archt., 706 Sharp Bldg.; construction by owner.

Mo., St. Louis.—B. J. Rain, University City; erect \$10,000 residence and garage, 7200 Waterman St.; 2 stories; 28x36 ft.; brick, W. P. McMahon, Archt., Title Guaranty Bldg.

Mo., St. Louis.—C. L. Schell, 1412 Washington Ave.; erect \$10,000 residence and garage, 7100 Pershing Ave.; 2 stories; 27x35 ft.; brick; Nolte & Naumann, Archts., Fullerton Bldg.

N. C., Charlotte.—Charlotte Consolidated Construction Co.; erect \$9000 residence, East Blvd.; 8 rooms; also two 6-room residences, Avondale and Magnolia Aves.; \$5000 each.

N. C., Lexington.—Chas. Oscar Slink; erect residence.

Okla., Oklahoma City.—Mrs. Annie Hopper; erect \$50,000 frame residence, 205 W. Reno Ave.

Tenn., Jackson.—W. H. Williams; erect residence, Campbell St., between Davison and Crescent Aves.

Tex., Alpine.—W. H. Terry; erect \$20,000 residence; aeroplane type; stucco finish.

Tex., Amarillo.—O. K. Gilvin; erect \$10,000 residence, 1915 Harrison St.

Tex., Amarillo.—Fred Bone; erect 2 residences, 1700 Hughes St.; \$15,000.

Tex., Dallas.—Harry White; erect 6-room brick cottage, 4022 Colonial St.; about \$10,000.

Tex., Dallas.—Mrs. N. L. Powers; erect 6-room frame cottage, 125 N. Windomere St.; about \$10,000.

Tex., Dallas.—W. H. Goodnight; erect 6-room brick-veneer cottage, 403 N. Edgefield St.

Tex., El Paso.—W. H. Garvey; erect two brick bungalows, East El Paso addition; \$10,000.

Tex., Houston.—Geo. T. Broun; erect 3 cottages; 6-7 rooms; \$14,000.

Tex., San Antonio.—Beverly W. Spillman; preparing plans for number of dwellings.

Va., Richmond.—Mrs. Sallie M. Ellett; repair dwelling, 1003 Grove Ave.; \$10,000.

W. Va., Eckman.—Pulaski Iron Co.; erect 40 dwellings for employees.

W. Va., Fairmont.—Industrial Homes Co.; capital stock \$200,000; H. L. Heintzelman, W. L. Heintzelman, J. M. Brownfield and others, incorporators.

Government and State.

Okla., Tahlequah.—Dept. of Interior, Cato Sells, Indian Commr., Washington, D. C.; bids until Aug. 30 to erect brick school and assembly hall at Cherokee Orphan Training School. (See Schools.)

Tex., San Antonio.—Alamo Building.—State; erect \$11,000 concrete roof on Alamo Bldg. Address The Supt.

Tex., Waco.—Home.—Comsn. for Home for Neglected and Dependent Children, Lieut. Gov. W. A. ohnson, Austin, and others; bids until Aug. 30 to erect 2 buildings and heating plants; \$100,000; ultimate plans call for 12 buildings; Ross & Redd, Archts., Waco. (Lately noted.)

Hotels.

Fla., Cromanton.—Hamilton Coleman and others; organized \$50,000 company; enlarge hotel, build roof garden, etc.; also operate ferry between Panama City and Cromanton.

Fla., Plant City.—Hotel Colonial, J. T. Stapleton, Prop.; expend \$40,000 to remodel and enlarge hotel; 24 additional rooms, with private baths.

Mo., Nevada.—L. C. Hornshu; erect \$250,000 hotel; 4 stories; reinforced concrete, steel and brick; concrete foundation and floors; H. R. Primmer, Archt.

Tex., Del Rio.—San Felipe Hotel Co.; erect \$225,000 hotel; 6 stories; reinforced concrete, brick and stone; concrete floors; G. Willis, Archt., Chandler Bldg.; M. L. Diver, Engr., Ave. C and Travis St.; both San Antonio.

Tex., Marlin.—Majestic Hotel; erect \$25,000 addition to hotel; brick, concrete, tile and wood; tile roof; wood floors. Address Herbert S. Green, Archt., San Antonio.

Hospitals, Sanitariums, Etc.

Fla., Pensacola.—Escambia County Commrs.; considering calling election on tax to erect tuberculosis Sanitarium; Dr. F. A. Brink and Mrs. Adelaide Brunk, members of Escambia County Tuberculosis Assn.

Ga., Moultrie.—Moultrie Hospital Co.; erect \$60,000 hospital.

Miss., Ellisville.—Colony for Feeble-Minded, Mayor J. T. Taylor, Chrmn. Board of Trustees; erect brick buildings.

Tex., Dallas.—Baptist Memorial Hospital, J. B. Franklin, Supt., Junius and College Sts.; erect building for women; accommodate 150 beds, laboratories, operating-rooms, etc.; 120x100 ft.; T-shaped; also dispensary to accommodate 300 to 400 patients daily; 64x164 ft.; both structures reinforced concrete and brick veneer; 5 stories; total cost \$800,000; C. D. Hill Co., Archt.

Tenn., Memphis.—Dr. W. C. Campbell; erect \$55,000 clinic, Madison Ave.; 1 story; Mahan & Broadwell, Archts. (Lately noted.)

Tex., Gonzales.—Dr. Geo. Holmes; erect \$50,000 hospital; brick and tile; steam heat; 20 rooms for patients.

Tex., Houston.—United States Public Health Service, Hugh S. Cummings, Surgeon-General, Washington, D. C.; erect additional buildings at hospital, Camp Logan; Major John M. Holt, surgeon in charge.

Miscellaneous.

Fla., Miami Beach.—Sea Walls.—Miami Beach Bay Shore Co.; construct 15 mi. wooden sea wall on Flamingo Bay; I. W. Conklin, Contr.; construct 1000 ft. cement and concrete sea wall on Collins Canal; George Mackenzie, Contr.

Ky., Owensboro.—Clubhouse.—Country Club, M. C. Stuart, Prest.; expend \$10,000 to construct swimming pool, dance pavilion, etc.

N. C., Goldsboro.—Clubhouse.—Goldsboro Woman's Club; erect clubhouse and apartment building.

N. C., Marion.—Clubhouse.—J. Q. Gilkey, Chrmn. Committee; organizing stock company to erect \$75,000 clubhouse on Catawba Lake near Marion.

Okla., Duncan.—Sheds.—Long-Bell Lumber Co.; erecting \$40,000 brick lumber storehouse.

Tenn., Jackson.—Bathhouses.—Rotary Club; promoting erection of 25 bathhouses at municipal swimming pool, Lancaster Park; W. C. Hickman and Randolph Cole in charge of construction.

W. Va., Morgantown.—Clubhouse.—John H. McDermott; developing 8-acre tract for country club; erect clubhouse, construct links, etc.; Young Bros., Rochester, N. Y., Landscape Archts.

Railway Stations, Sheds, Etc.

Ga., Savannah.—Atlantic Coast Line, J. E. Willoughby, Chf. Engr., Wilmington, N. C.; erect 1-story frame warehouse, Wheaton St.

Miss., Biloxi.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky.; reported considering erection of station.

N. C., Greensboro.—City; plans to vote on \$1,300,000 bonds to erect passenger station for use of Southern R. R.; bill pending in Legislature authorizing election. Address The Mayor.

S. C., Gaffney.—Southern R. R., B. Herman, Chief Engr., M. W. and S., Lines East, Charlotte, N. C.; considering erecting passenger shed.

Tex., Dallas.—Texas & Pacific R. R., E. F. Mitchell, Chf. Engr.; remodel office building, Pacific Ave., into freight office; \$85,000.

Schools.

Ala., Bay Minette.—Building Comm., W. D. Stapleton, Chrmn.; bids until Sept. 28 to erect Baldwin County high-school building; \$40,000 to \$50,000; plans and specifications may be seen at Baldwin County Bank Bldg. by applying to Mr. Stapleton. (Previously noted.)

Ark., Altus.—Altus Special School Dist. No. 31; erect \$20,000 building; 47x75 ft.; 2 stories; brick; hardwood floors; metal ceilings and roof; plaster board; rolling partitions; ventilators; J. H. Bliss, Archt., Little Rock. Address J. M. Hopper, Altus. (Lately noted.)

Ark., War Eagle.—School Dist.; erect concrete building; 30x40 ft. Address Board of Education.

Fla., Miami.—Dade County Board of Public Instruction, R. E. Hall, Supt.; erect additions

to schools in Miami Special Tax Dist. No. 2, Riverside, Southside, Buena Vista and Highland Park; also buildings in colored settlement and on Johnson St.; masonry walls; frame partitions; built-up roof; wood floors; E. A. Nolan, Archt., Townley Bldg.; owner purchases material and builds by day labor. (Lately noted.)

Ga., Atlanta.—Oglethorpe University; erect \$50,000 stadium.

Ga., Plains.—Trustees Plains High School; called election Aug. 17 on \$50,000 bonds to erect building.

Ky., Blackey.—Consolidated Fuel Co.; erect school, Rockhouse. (See Dwellings.)

Ky., Cromona.—Elkhorn Coal Corp.; erect school building, Haymond. (See Churches.)

Ky., Hopkinsville.—M. and F. College, Rev. J. H. Taylor, Prest.; erect \$50,000 building; 40x100 ft.; brick; asbestos shingle roof; pine floors; heating, \$1200; electric lighting; construction by student labor. Address W. A. Rayfield & Co., Archts., Birmingham, Ala.

Ky., Lexington.—Fayette County Board of Education, Nannie G. Faulconer, Supt.; erect 2 school buildings; considering bids.

Ky., Louisville.—University of Louisville, Dr. John L. Patterson, Prest.; reported considering erecting \$1,000,000 apartments and science building, 1st and Chestnut Sts.; brick.

Ky., Paducah.—Board of Education; erect \$100,000 high and grade school; brick; Navin, Henry & Wischmeyer, Archts., Starks Bldg., Louisville.

Ky., Sergeant.—Apex Coal Co.; erect school building. (See Churches.)

Ky., Whitesburg.—Letcher County Board of Education, E. B. Hale, Supt.; erect three county schools.

La., New Orleans.—School Board; erect 12-room annex to Crossman School; construction by force account. (Ole K. Olsen, 822 Perdido St., incorrectly reported to have contract for cement, sand and concrete materials.)

La., Lake Charles.—City School Board, Grant Mutersbaugh, Prest.; bids until Sept. 7 to erect school building, 11th St., west of Kirkman; 1 story; 3 rooms; plans and specifications from Phillips & McCook, Archts.

La., Oak Grove.—School Dist. No. 8; votes Aug. 31 on \$35,000 bonds to erect building. Address Board of Education.

La., Rosedale.—School Dist. No. 3; votes Sept. 9 on \$25,000 bonds to erect auditorium and additional classrooms at Shady Grove School. Address Iberville Parish School Board, Plaquemine, La.

Miss., Clarksdale.—School Board, J. H. Johnson, Secy.; bids until Aug. 17 to erect brick school building for negroes; plans and specifications from office Frank P. Gates & Co. and office Mr. Johnson.

Miss., Jeff Davis.—Jeff Davis Consolidated School Dist. (Union, New Liberty and part of Castleberry); voted \$15,000 bonds to erect building. Address Yalobusha County Board of Education.

Miss., Vicksburg.—City; votes Sept. 21 on \$625,000 bonds, including \$125,000 to erect school building. Address The Mayor.

N. C., Asheville.—Grove Park School for Girls, Rev. T. A. Cosgrove in charge; erect school, gymnasium, swimming-pool, etc., in Edgemont Park.

N. C., Charlotte.—School Board, Plummer Stewart, Chairman; erect 2 wings to Alexander Graham School, E. Morehead St.; 25 to 30 rooms; bids until Aug. 20; H. P. Harding, Supt. of Schools.

N. C., Kernersville.—School Commrs. and

city officials considering erecting school addition; tentative plans by G. W. Armfield, Greensboro, N. C.; request County Board of Education to extend school district and provide bond election.

N. C., Weaverville.—Buncombe County Board of Education, Ethel Terrell, Supt., Asheville; rejected bids to erect schools at Weaverville and Emma: \$40,000 and \$50,000, respectively; Chas. C. Hook, Archt., Charlotte. (Lately noted.)

Okla., Muskogee.—Bacone College; considering erecting \$100,000 memorial building.

Okla., Tahlequah.—Dept. of Interior, Cato Sells, Indian Commr., Washington, D. C.; bids until Aug. 30 to erect brick schoolhouse and assembly hall at Cherokee Orphan Training School; plans and specifications at office Oklahoman, Oklahoma City; Indian warehouses, Chicago, St. Louis and San Francisco; Builders' Exchange, St. Paul, Minn., and office Supt. Cherokee Orphan Training School, Tahlequah.

S. C., Catechee.—Norris Cotton Mills; erect school. (See Warehouses.)

S. C., Charleston.—County Board of Education, Henry H. McCarley, Supt.; erect \$25,000 school building, Chicora Place; 4 rooms; auditorium to seat 200, cloakrooms, etc.

S. C., Iva.—School Dist.; voted \$10,000 bonds to erect addition to school building; 4 rooms; brick veneer. Address Dist. School Trustees.

Tenn., Jackson.—City, J. D. Johnson, Mayor; voted \$151,000 school, street, sewer and water bonds; \$30,000 to remodel Whitehall school; \$20,000 to repair and paint school and \$7000 for heating system for College St. school, etc. (Lately noted.)

Tex., San Antonio.—Beverly W. Spillman; preparing plans for \$10,000 college building. Tex., Tahoka.—School Dist.; voted \$30,000 bonds. Address Board of Education.

Va., Norfolk.—Board of Education; expend \$35,000 to repair and install heating systems in various schools and \$15,000 for plumbing.

W. Va., Buckhannon.—Wesleyan University; enlarge gymnasium.

W. Va., Charleston.—Board of Education Union School Dist.; erect school building; \$100,000 bonds voted. (Lately noted.)

W. Va., Falling Waters.—Board of Education, Falling Waters School Dist., F. M. Lloyd, Secy.; called election Aug. 23 on \$36,000 bonds to erect school buildings, Marlowe and Hainesville. (Lately noted.)

W. Va., French Creek.—Upshur County Board of Education; erect high-school building.

W. Va., Morgantown.—St. Francis Convent; erect building; brick, stone and hollow tile; slate roof; steam heat; oak floors; \$15,000; bids opened Aug. 16; plans and specifications from office Albert Breternitz, Archt., Fordyce Bldg., Clarksburg, W. Va. Address Rev. Peter Flynn, Morgantown. (See Machinery Wanted—Building Material; Heating Plant; Plumbing; Roofing; Electric Wiring.)

W. Va., Itmann.—Board of Education, Slab Fork School Dist., H. F. Hartley, Prest., Mahan, W. Va.; erect building; 70x90 ft.; brick; A. F. Wysong, Archt., Princeton, W. Va. (Previously noted.)

W. Va., Walkersville.—Board of Education; erect building for Collins Settlement High School; 61x96 ft.; 2 stories and basement; brick, stone and hollow tile; built-up roof; hot-air heating, alternate bid for steam seat; electric lighting; \$42,000; plans and specifications at office Albert Breternitz, Fordyce Bldg., Clarksburg, W. Va. Address G. W. Blair, Secy. Board of Education, Crawford, W. Va. (See Machinery Wanted—Building Material; Heating Plant; Electric Work; Roofing.)

Stores.

Ala., Birmingham.—John B. Reid & Co.; erect brick building, 14th St. and 11th Ave. south; \$25,000.

Ala., Dothan.—Malone-Beall Dry Goods Co.; enlarging store.

Ark., Little Rock.—W. T. Grant Co., 28 W. 23d St., New York; expend \$20,000 to alter building, 604-06 Main St.; 50x140 ft.; remove center wall; construct front; tar and gravel roof; hardwood floors; interior tile; metal ceilings; plaster board; ventilators; city heat; hand-power elevator; contract let Sept. 1. Address Sanders & Ginocchio, Archts., Hollenberg Bldg., Little Rock.

Ga., Macon.—W. T. Grant Co., New York; leased 3 buildings, 3d St. near Cherry; reported to erect addition in rear, improve front, etc.; Curran R. Ellis, Archt., Macon.

Ga., Savannah.—A. Monroe; repair 3 stories and erect 2-story addition to building, W. Broad and Charlton Sts.

Ga., Savannah.—O. Levy; raise building and erect 1-story addition, 41st and Burroughs Sts.

Mo., St. Louis.—Quality Realty Co., International Life Bldg.; reported to erect \$200,000 store, Forest Park Blvd.; 4 stories; reinforced concrete and brick; concrete floors; P. J. Bradshaw, Archt., International Life Bldg.

Miss., Pontotoc.—J. H. Latham Co.; erect building to replace structure lately noted damaged by fire.

Miss., Pontotoc.—W. C. Pittman; erect building to replace structure lately noted damaged by fire.

Miss., Pontotoc.—New Albany Wholesale Grocery Co.; erect building to replace structure lately noted damaged by fire.

Mo., St. Louis.—Central Nat'l Bank Bldg. Co., 705 Olive St.; remodel building for candy store; \$12,000; Roy S. Price, Arcade Bldg., and W. H. Gruen, 1530 Chestnut St., Archts.; construction by owner.

N. C., Forrest City.—J. F. Alexander; erect 2 brick buildings; completion within 60 days.

Tex., Dallas.—C. B. McConnell; erect \$12,500 one-story brick building, 2108 Bryan St.

Tex., San Antonio.—Mrs. Delia R. Bishop; repair building, Losoya and Crockett Sts.; erect additional story; \$25,000.

Tex., San Antonio.—F. W. Woolworth Co.; erect \$185,000 store, Houston St. and Alamo Plaza; 3 stories and basement; 80x100 ft.; reinforced concrete; terra-cotta and gray faced brick; composition roof; wood floors, tile in lobbies; steam heat; electric lighting; DePuy Construction Co., lowest bidder. Address Adams & Adams, Archts., Gibbs Bldg. (Lately noted.)

BUILDING CONTRACTS AWARDED

Bank and Office.

Fla., Coconut Grove.—Bank of Coconut Grove; erect \$15,000 building; 44x60 ft.; concrete block, stucco, cut stone entrance; Barrett and tile roof; tile floors; electric lights; W. C. DeGarmo, Archt., Miami; A. B. Wade & Son, Contrs., Coconut Grove. (Lately noted.)

La., New Orleans.—Federal Land Bank; repair and alter building, 821-27 Union, Carondelet, Baronne and Gravier Sts.; \$11,750; Favrot & Livandais, Archts.; Jefferson Construction Co., Contr.

Mo., St. Louis.—Chateau Trust Co., J. W. Watson, Prest.; reported to erect \$225,000 bank and office building, 4020 Chateau Ave.; 7 stories; 50x150 ft.; N. B. Howard, Archt., Century Bldg.; F. L. Cornwall, Contr., La Salle Bldg.

Mo., St. Louis.—First Nat'l Bank, F. O. Watts, Prest.; reported to erect \$250,000 addition to building, Broadway and Locust St.; 5 stories; 57x102 ft.; Archts., Cass Gilbert, 244 Madison Ave., New York, and Mauran, Russell & Crowell, Chemical Bldg., St. Louis; Westlake Constr. Co., Contr., Railway Exchange Bldg. (Previously noted to erect building.)

W. Va., Hinton.—Bank of Summers; erect \$125,000 building; 2 stories; 50x60 ft.; reinforced concrete frame; Indiana limestone trim; Fenestra sash; Richard M. Bates, Jr., Archt., Huntington; King Lumber Co., Contr., Charlottesville, Va. (Previously noted.)

Churches.

Fla., Jacksonville.—Baptist Home Mission Board; remodel building, E. Bay and Washington Sts., for Seamen's Institute of Jacksonville, Capt. Karl J. Frost, Director; \$110,000; F. A. Applegate, Contr.

Ga., Winder.—Methodist Episcopal Church South, Rev. J. H. Mashburn, Pastor; erect Sunday-school annex and improve building; \$40,000; about 44x56 ft.; stone, brick and wood; metal roof; wood floors; A. F. N. Everett, Archt., Atlanta; R. W. Wimbish, Contr., Savannah; S. D. Mizell, Savannah, Contr. for plumbing and heating; construction progressing.

Ky., Paducah.—Missionary Baptist Church,

H. W. Ellis, Pastor; erect \$55,000 building; 64x122.6 ft.; brick, stone and steel; asphalt roof; oak and pine floors; heating plant, \$5000; electric lights, \$500; concrete floors; D. Harry Jameison, Archt.; Jack Cole, Contr. (Lately noted.)

Md., Baltimore.—Protestant Episcopal Cathedral of the Incarnation; erect \$330,000 synod hall, first unit of proposed cathedral buildings, University Parkway; Bertram K. Goodhue, Archt., 2 W. 47th St., New York; Morrow Bros., Fidelity Bldg., Baltimore, Contractors for excavation for additional bay, alteration work on undercroft, changing supports, etc.; Dr. Arthur B. Kinsolving, Saratoga and Liberty Sts., Chrmn.; Dr. Hugh Birkhead, 18 W. Read St., and others, Bldg. Comm. (Previously noted.)

N. C., Wilmington.—First Baptist Church; erect \$80,000 Sunday-school annex; 54x120 ft.; 3 stories; brick; Mastie roof; pine floors; assembly hall, roof garden, etc.; steam heat, \$10,000; electric lights, \$1000; Herbert L. Cain, Archt., 12 N. 9th St., Richmond, Va.; Jas. B. Lynch, Assn. Archt.; L. H. Vollers, Contr., Wilmington. (Lately noted.)

City and County.

Ala., Birmingham.—Fire Station.—City, John H. Taylor, Commr.; erect \$85,000 fire station, 6th Ave. between 19th and 20th Sts.; 50x165 ft.; 2 stories; concrete; Barrett specification roof; tile floors; steam heat, \$3700; electric lights, \$1500; D. O. Whildin, Archt., Title Guarantee Bldg.; Smallman-Brice Construction Co., Contr.; Gamewell Fire Alarm Telegraph Co., Contr. for fire-alarm system. (Lately noted.)

Okla., Oklahoma City.—Coliseum.—City; erect \$187,000 coliseum; 1 story; 160x204 ft.; J. W. Hawk, Archt.; Campbell & Price, Contrs., 610 Majestic Bldg.

Dwellings.

D. C., Washington.—P. R. Bailey, Davidson Bldg.; erect \$16,000 residence, Jennifer St. N. W.; 2½ stories and basement; 34x28 ft.; Meatyard Constr. Co., Contr., Davidson Bldg.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Sarasota.—Miss Hazel Harrison; erect residence; contract let. (Lately noted under Apartment House.)

Ga., Lindale.—Massachusetts Mills of Georgia; erect 25 cottages. (See Schools.)

Ky., Lexington.—S. L. Bastin, 804 Fayette National Bank Bldg.; erect \$50,000 residence, E. Main St.; 2 stories and basement; Frankel & Curtis, Archts., Ben All Theater Bldg.; Congleton Lumber Co., Contr.

Ky., Louisville.—R. Baylor Hickman; alter residence; \$10,000; 26x18 ft.; frame; shingle roof; wood floors; hot-water heat, \$820; electric wiring, \$250; Arthur R. Smith, Archt., 507 Realty Bldg.; John Bott, Contr.

La., New Orleans.—H. E. Groffman; erect \$27,635 frame residence, 12 Newcomb Blvd.; M. H. Goldstein, Archt.; J. H. Hasse, Jr., Contr.

Mo., St. Louis.—Saum & Saum, 625 Chestnut St.; erect 3 dwellings, Shaw and Alfred Sts.; 1½ stories; 40x27 ft.; \$20,000; B. J. Charlesville, Contr., 510 Chestnut St.

S. C., Pamplico.—E. C. Lowery, Contr., Concord, N. C.; to erect 4 residences.

Va., Saltville.—John George; erect residence; contract let.

W. Va., Charleston.—Frank Cox, Contr.; erect \$15,000 residence, Myrtle Ave., South Side; 8 rooms; 1 story; brick and tile.

Miscellaneous.

Ga., Lindale.—Auditorium, etc.—Massachusetts Mills of Georgia; erect auditorium, nursery and kindergarten, 50-room boarding-house, etc. (See Schools.)

Railway Stations, Sheds, Etc.

Ark., Osceola.—St. Louis & San Francisco R. R., J. C. Jonah, Ch. Engr., Railway Exchange Bldg., St. Louis; erect \$100,000 passenger station; 1 story; 26x153 ft.; reinforced concrete, tile and stucco; concrete foundation; R. C. Stephens, Archt.; J. E. Nelson & Sons, Contrs., 3240 Michigan Blvd., Chicago. (Previously noted.)

Schools.

Ala., Waterloo.—School Board; erect \$15,000 school; 5 classrooms, 2 workrooms and auditorium; contract let.

Fla., Pensacola.—Escambia County Board of Public Instruction, A. S. Edwards, Supt.; erect 2-room frame addition to school building, Myrtle Grove, and 2-room frame school, Ryneville; Walker D. Willis, Archt.; contracts let. (Lately noted.)

Ga., Attapulgus.—Attapulgus Consolidated Dist.; erect \$25,000 school; 1 story; 6 classrooms and auditorium; stucco; composition roof; wood floors; steam heat; W. H. Kivilecki, Archt.; Ludlum Construction Co., Contr.; both Bainbridge, Ga. (Lately noted.)

Ga., Lindale.—Massachusetts Mills in Georgia; erect addition to school building; auditorium, 2 stories; contain swimming pool, library, reading-room, etc.; also erect building for day nursery and kindergarten; 50-room boarding house, 2 stories; 25 cottages; Lockwood, Greene & Co., Contrs., Atlanta.

Ga., Ty Ty.—Consolidated School Dist.; erect \$20,000 building; 100x130 ft.; brick; composition roof; wood floors; Alexander Blair and Miss Elizabeth Holt, Archts., both Macon; W. D. Powell, Contr.; O. A. Thaxton, Supt. of Schools; both Moultrie, Ga. (Lately noted under dwellings.)

Ky., Bagdad.—County Board of Education, Mrs. Luther Hall, Supt., Shelbyville; erect

\$20,000 addition; 2 stories and basement; 4 rooms; brick; Thos. J. Nolan, Archt., Courier-Journal Bldg., Louisville; Wm. Easley, Contr., Bagdad. (Previously noted.)

Ky., Locust Grove.—County Board of Education, Mrs. Luther Hall, Supt., Shelbyville; erect \$12,000 school; 1 story; Joseph & Joseph, Archts., Atherton Bldg., Louisville; Henry Cheak, Contr., Shelbyville.

Ky., Princeton.—Board of Education, S. D. Hodge, Prest.; erect addition and alter high school; 2 and 3 stories; 83x110 ft.; brick; steel I-beams; wood roof trusses; yellow pine floors; \$18,000; Thos. J. Nolan, Archt., Courier-Journal Bldg., Louisville; E. Young, Contr., Princeton. (Lately noted.)

Ky., West Louisville.—Davies County Board of Education; erect \$17,000 school building; 2 stories; 33x60 ft.; 6 rooms and auditorium; C. W. Kimberlin, Archt.; Tom Sublett, Contr.; both Owensboro, Ky. (Lately noted.)

La., New Iberia.—St. Peter's Boys' College. Brother Arsenius in charge; erect additional building; 30x60 ft.; frame; 4 study-rooms; 2 stairways; Eugene Kuillot, Contr.

Md., Baltimore.—Board of Awards, City Hall; install heating plant in school No. 14; Henry A. Kries & Sons Co., 6 W. Lombard St., Contr. at \$13,799; Henry G. Perring, City Engr., City Hall.

S. C., Charleston.—Medical College; erect \$55,000 addition, Locust and Mills Sts.; 2½ stories; brick and steel; David B. Hyer, Archt.; Simons-Mayrant Co., Contr.

Va., Blacksburg.—Virginia Polytechnic Institute; erect \$20,000 apartment-house; 4 five-room apartments; 2 stories; brick cased; also \$6000 detached shingle dwelling; Eubank & Caldwell, Contrs.

Va., Princess Anne.—Kingsville School Dist.; erect \$10,000 addition to building; 22x60 ft.; 2 rooms; frame; wood shingle roof; rolling partitions; Diehl & Vance, Archts., A. B. Fussell, Contr., 55 Rogers St.; both Norfolk.

W. Va., Martinsburg.—Board of Education; erect Winchester Ave. school; Mr. Appleby, Contr.; A. R. Small, Contr., at \$3214, for concrete basement.

W. Va., Newburg.—Board of Education Lyons' School Dist.; erect high-school building; S. W. Ford, Archt. and Contr., Prunty Bldg., Clarksburg, W. Va.

W. Va., Wheeling.—St. Michael's Parochial School; erect \$17,000 annex for school and Sisters' home, Edgewood; brick and frame; asphalt roof; maple floors; steam heat; Albert P. Dayton, Archt.; Porter-Bitzer Co., Contrs. (Lately noted under Churches.)

Stores.

Ala., Mobile.—Gayfer Dept. Store, 171 Dauphin St.; remodel 4-story building; 125x150 ft.; and erect 1-story addition, 12-20 St. Emanuel St.; reinforced concrete and brick; concrete foundation; reinforced concrete floors; \$125,000; Geo. B. Rogers, Archt., Hancock & Harbin, Contrs., St. Francis St. (Previously noted.)

Fla., Fort Meyers.—Peter Tonneller; erect \$40,000 store and apartment building; 46x96 ft.; cement block; composition roof; concrete and tile on first floor; wood joists and floors on second and third; city lighting; metal ceilings; interior tile; ventilators; 750 sq. ft. of plate glass; steel columns; steel girders and beams; steel fire-escapes, etc. Address W. E. Futral, Archt. and Contr., who constructs by day labor.

Fla., Lakeland.—L. W. Yarnall; erect \$50,000 business and apartment building; 65x125 ft.; brick; concrete and hardwood floors; gas

heating; electric or gas lighting; metal ceilings; Marshall & Jackson, Archts. and Contrs. (Lately noted.)

Fla., Miami Beach.—Hamilton Michaelson & Co.; erect 1-story concrete building, Ocean Drive and Biscayne Ave.; 63x53 ft.; \$10,000; Bonsfield & Betteridge, Contrs.

Ga., Atlanta.—Investment Co. of the South, 26-28 Walker St.; erect 2-story brick business building; \$35,000; G. H. Butler, Contr.

N. C., Forest City.—I. N. Biggerstaff; erect 3 brick buildings, Depot St.; contract let.

Okla., Duncan.—C. H. Riviere; erect \$30,000 building; 2 stories; brick; contract let.

Okla., Duncan.—O. M. Morris; erect \$35,000 building; 2 stories; brick; contract let.

Okla., Duncan.—W. L. Brittain; erect \$17,000 building; brick; 1 story; contract let.

Tenn., Memphis.—W. J. Brinkley, Iuka, Miss.; erect \$38,000 building for storing and parking garage; 83x90 ft.; brick and concrete; gravel roof; asphalt and wood floors; steam heat, \$3000; city lights; Harker & Cairns, Archts.; McKnight & Ozanne, both Memphis, Contrs. (Lately noted.)

Va., Portsmouth.—Mrs. Sallie K. Williams; rebuild burned store, South St. near Middle; brick; Morgan & Baker, Contrs.

W. Va., Huntington.—Walter Lewis and M. Cohen Co.; erect business and office building, 4th Ave., between 8th and 9th Sts.; 48x180 ft.; 4 stories; stone, steel and frame; wood floors; city lights; L. J. Dean, Archt., Foster Bldg.; Huntington Iron Works Co., Contr. for steel structural work. (Lately noted.)

Theaters.

Fla., Miami.—Wm. A. Leach; purchased Green Tree Inn; will convert into theater.

Ga., Savannah.—Arthur M. Lucas, Odeon and Folly theaters; erect theater, Abercorn and Congress Sts.

S. C., Sumter.—Columbia Stage Society; plans to erect theater.

Tex., El Paso.—Frank P. Jones, President El Paso Bank & Trust Co.; interested in erection \$1,500,000 theater, hotel and store building, Mesa Ave. and Franklin St.

W. Va., Wheeling.—Edw. B. Franzmeier, 1425 Chapline St.; preparing plans for theater, 14th and Market Sts.; brick and concrete.

Warehouses.

Ala., Birmingham.—Iron City Pipe & Foundry Co.; erect supply-house, Ave. A; site 50x100 ft.

Fla., Jacksonville.—Commodore Point Terminal Co., Geo. H. Baldwin, Mgr.; erect \$25,000 warehouse addition; about 80x150 ft.

Ga., Atlanta.—H. J. Carr & Co., Haynes St.; erect \$150,000 warehouse; 3 stories; reinforced concrete; construction by owner.

Ga., Atlanta.—Empire Furniture Co., 21 Trinity Ave.; erect 2-story warehouse; brick and tile; \$30,000; Massell Construction Co., Contr.

Ky., Hopkinsville.—Universal Tobacco Co., M. C. Boyd, Mgr.; erect \$75,000 warehouse; 2 stories and basement; 40x220 ft.; Edw. H. Hester, Contr.

Ky., Hopkinsville.—J. E. Cooper & Co.; erect \$85,000 warehouse; 1 story and basement; 80x265 ft. and 48x128 ft.; Edw. H. Hester, Contr.

Ky., Louisville.—Genio Light Co., 514 Second St.; erect 1-story warehouse; brick; 65x140 ft.; Fred Erhart, Archt., Norton Bldg.

Ky., Louisville.—Mengel Box Co.; erect warehouse, 11th St. and Garland Ave.; \$35,000.

August 19, 1920.

MANUFACTURERS RECORD.

139

La., New Orleans.—Appalachian Corp.; erect \$200,000 warehouse to replace burned structure; 110x174 ft.; mill construction; slow-burning floors; electric lighting; freight elevator. (Lately noted.)

Md., Baltimore.—Whitaker Paper Co.; erect warehouse, Guilford Ave., Saratoga and Davis Sts.; 100x188 ft.; 8 stories; reinforced concrete and brick; cement floors; steam heat; electric lights; vault; steel sash and trim; offices on 6th floor; Haskell & Barnes, Archts., 304 N. Charles St.; bids opened Aug. 12; contractors estimating; Morrow Bros., Fidelity Bldg.; Price Construction Co., 210 Maryland Trust Bldg.; Geo. A. Fuller Co., American Bldg.; Chas. L. Stockhausen Co., Gay and Water Sts.; B. F. Bennett Building Co., 123 S. Howard St.; Cogswell-Koether Co., 406 Park Ave.; J. Henry Miller, Inc., Miller Bldg., Franklin and Eutaw Sts.; all of Baltimore; Foundation Co., Turner Construction Co., Ferguson Co.,

all of New York; Ferro-Concrete Construction Co., Cincinnati; S. J. Rogers Co., Philadelphia. (Previously noted.)

Mo., St. Louis.—Helbrung & Grim, 904 Washington Ave.; expend \$25,000 to alter building, 9th and Morgan Sts., for warehouse; Wedemeyer & Nelson, Archts., Wainwright Bldg.

Mo., St. Louis.—St. Louis Iron & Metal Co., 1922 Carr St.; expend \$10,000 to alter building, 10th and O'Fallon Sts., for warehouse; Wedemeyer & Nelson, Archts., Wainwright Bldg.

Mo., St. Louis.—Wangler Realty Co., 314 N. Broadway; expend \$25,000 to alter building, 10th and Mullanphy Sts.; Wedemeyer & Nelson, Archt., Wainwright Bldg.

S. C., Catescehee.—Norris Cotton Mills; erect warehouse; 50x100 ft.; 3 stories; mill construction; sprinkler system; also Y. M. C. A. building; about 108x108 ft.; 1½ stories and base-

ment; hollow tile and stucco; gymnasium; social and club rooms; also 6-room school building; about 47x88 ft.; hollow tile and stucco; slate roof; J. E. Sirrine & Co., Architects, Greenville, S. C.

S. C., Charleston.—Charleston Warphouse & Forwarding Co., Edw. A. Eve, Prest.; Tristram T. Hyde, Secy.-Treas.; Jas. H. Haskell, Mgr.; erecting \$250,000 reinforced concrete warehouse, Hasell St. between E. Bay and Concord Sts.; Charleston Engineering & Contracting Co., Contr. (Previously noted.)

S. C., Florence.—Fred Germany Co.; purchased site, Front and Barranger Sts.; erect warehouse and office building.

W. Va., Huntington.—D. A. Mossman; erect 2-story brick warehouse and storeroom, 4th Ave. and 5th St.; Huntington Iron Works Co., Contr. for steel structural work.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Agricultural Machinery.—R. Amiel, G. N. Spiliotopoulos & Co., 72 Rue St. Lazare, Paris, France.—Data and prices on agricultural machinery; view to representation.

Aluminum Castings.—J. F. Fitch, Buchanan, Va.—Names and addresses mfrs. of small aluminum castings.

Barrels or Kegs.—Sherwood Atkinson, Norwood, Ga.—100 ten-gal. cypress or oak kegs, or oak or cypress barrels for 1000 gals.

Boiler.—Miami Ice Cream & Dairy Co., 411 5th St., Miami, Fla.—Prices on 25 H. P. boiler.

Boilers.—See Gas Plant Equipment.

Boilers.—See Brick Plant.

Boiler.—Park Commrs., Baltimore, Md.—Bids until Aug. 25; install cast-iron hot-water sectional manifold water-tube boiler in Palm House, Druid Hill Park; Winfield F. Courts, Park Engr.

Boiler Tubes.—R. P. Johnson, First National Bank Bldg., Wytheville, Va.—Forty 3-in. by 11-ft. second-hand boiler tubes; good condition; immediate shipment; dealer's price.

Bottling Machinery.—Eugene Poche, Patterson, La.—Names and addresses mfrs. bottling machinery.

Bottling Plant.—Eagle Bottling Works, D. Canessa, Mgr., 312 Scanlon Bldg., Houston, Tex.—Bids until Oct. 15 for bottling mchy. and general supplies for bottling plant; daily capacity 500 cases.

Bricks.—Pelican Well Tool & Supply Co., Shreveport, La.—150,000 bricks for street paving; immediate delivery.

Brick Plant.—United Machine Works, O. Frederick, 55 W. 3d St., New York.—Data and prices on 10,000 daily capacity brick plant, including engine and boilers; f. a. s. New York for export shipment to Cuba.

Bridge Construction.—Clark County Supervisors, W. B. Raley, Clerk, Quitman, Miss.—Bids until Sept. 7; erect steel beam bridge over Pachuta Creek.

Bridge Construction.—Beaufort County Road Comsn., J. D. Bullock, Secy., Washington, N. C.—Bids until Sept. 6; 60-ft. steel bridge, 25-ft. center removable span with piers and abutments; plans, etc., with Resident Engr., Washington, and Gilbert C. White, Engr., Durham, N. C.

Bridge Construction.—Jasper County Commissioners, C. C. Brown, County Judge, Jasper, Tex.—Bids until Aug. 24; construct 1400-ft. bridge across Angelina River; plans with County Engr., at Jasper, and State Highway Dept., at Austin.

Bridge Engineer.—W. R. Neel, State Highway Engr., Walton Bldg., Atlanta, Ga.—To engage engineer for design and construction bridges of Highway Dept.

Building Materials.—See Gas Plant Equipment.

Building Material.—Jerry Run Coal Co., 1025 W. Main St., Grafton, W. Va.—Prices on building material.

Building Material.—Albert Breternitz, Archt., Fordyce Bldg., Clarksburg, W. Va.—Estimates on brick, stone, hollow tile, built-up roof, hot-air heating (alternate bid for steam heat) and electric-light plant for Collins Settlement Dist. High School, Walkersville, W. Va.; plans and specifications at office Mr. Breternitz.

Building Materials.—Conners Bros. Co., Gen. Contrs., 15 W. 91st St., New York.—Names and addresses mfrs. building materials.

Building Material.—Albert Breternitz, Fordyce Bldg., Clarksburg, W. Va.—Bids until Aug. 16 for brick, stone, hollow tile, slate roof, plumbing and electric wiring for St. Francis Convent, Morgantown, W. Va.; plans and specifications at office Mr. Breternitz.

Building Material.—Wm. Goldenburg, Daytona, Fla.—Bids about Aug. 27 for hollow fireproof tile, metal ceilings, ornamental terra-cotta, interior tile, wood block floors, concrete floors; for 200x140x76-ft. \$75,000 garage.

Candy Machinery.—Peerless Co., Gera, Va.—Names and addresses mfrs. mchy. to mfrs. commercial grades of candy.

Cars.—Arthur M. Loeb & Co., 15 E. 40th St., New York.—10 flat cars; 6 coal cars; 4 tank cars, 6000 gals. capacity, knocked down from export shipment, 60,000 to 80,000-lb. trucks; platforms as well as tanks to be entirely dismantled for weight shipment.

Cars.—Jerry Run Coal Co., 1025 W. Main St., Grafton, W. Va.—Prices on mine cars.

Cars.—Southern Pine & Hardwood Co., 219 Jefferson County Bank Bldg., Birmingham, Ala.—6 lumber dollies; immediate delivery.

Cartons.—J. F. Fitch, Buchanan, Va.—Names and addresses mfrs. small pasteboard cartons, about 2x3x3 in.

Coach.—Harvey Co., 113 South St., Baltimore, Md.—Standard-gauge combination coach and 50 to 55-ton Shay or Climax locomotive.

Coke.—Cherryville Foundry Works, Cherryville, N. C.—72-hour foundry coke.

Contractors' Machinery.—See Gas Plant Equipment.

Colors.—Protective Products Co., C. C. Bancroft, Gen. Mgr., 509 Chartres St., New Orleans, La.—Names and addresses mfrs. paints, who grind colors; red oxide, Spanish oxide and chrome greens; all ground in oil.

Conveying Machine.—Tibbets Construction Co., Mineral Wells, Tex.—Machine to unload gravel from cars to storage piles.

Conveyor.—United Machine Works, 57 W. 3d St., New York.—Screw conveyor, 90 to 130 ft. long, having 9 up to 12-in. screw.

Crates.—Thos. Y. Hamilton, High Point, N. C.—Names and addresses mfrs. crates and baskets for fruit.

Crushing Machinery.—Charles L. Hills, National Bank Bldg., Wheeling, W. Va.—30x12-in. roll crusher.

Doors.—Conners Bros. Co., Gen. Contrs., 15 W. 91st St., New York.—Names and addresses mfrs. doors.

Drainage System.—Pitt County Drainage Dist. No. 2, Drainage Dist. Commrs., George T. Leach, Chmn., Greenville, N. C.—Bids until Aug. 30; construct 23½ mi. ditches; 1,108,564 cu. yds. excavation; plans on file or with Harding & Rivers, Engrs., Greenville.

Drainage System.—Blue Lake Drainage Dist. Commrs., T. B. Abbey, Prest., Sumner, Miss.—Bids until Aug. 19; construct 11 mi. ditch; drain 16,700 acres; \$90,000; A. L. Dabney, Consult. Engr., Memphis, Tenn.

Dredging Equipment.—Augusta Silica Mining Co., Campbell Bldg., Augusta, Ga.—6-in. suction dredge, 50-ft. suction, 35-ft. pumping head; centrifugal pump, electrically driven; pump sand and gravel.

Electrical Equipment.—See Gas Plant Equipment.

Electrical Equipment.—Charles L. Hills, National Bank Bldg., Wheeling, W. Va.—Two 100 H. P. 3-phase 60-cycle 220-volt slow-speed motors, squirrel-cage or slip-ring type, new or second-hand; immediate shipment.

Electric Wiring.—See Building Material.

Elevators.—United Machine Works, 57 W. 3d St., New York.—3 enclosed case-bucket elevators of about 18, 23 and 32-ft., bucket 10x12-in., capable of carrying iron filings and steel turnings.

Engines.—See Gas Plant Equipment.

Fan (Exhaust).—Southern Pine & Hardwood Co., 219 Jefferson County Bank Bldg., Birmingham, Ala.—45 or 50-in. exhaust fan, with or without pipe connection; immediate delivery.

Files.—R. Amiel, G. N. Spiliotopoulos & Co., 72 Rue St. Lazare, Paris, France.—Data and prices on files; view to representation.

Fishing Tackle.—Frank Fales & Sons, 71 Dock St., St. Johns, N. B., Canada.—To represent mfrs. of fishing tackle, supplies, etc.

Engine.—See Brick Plant.

Engine.—Miami Ice Cream & Dairy Co., 411 8th St., Miami, Fla.—Prices on 50 H. P. oil engine.

Flywheel.—City Cotton Mills Co., Newton, N. C.—Flywheel; 18x26; for 300 H. P. Corliss engine manufactured by C. & G. Cooper Co., Mt. Vernon, Ohio.

Evaporator.—Sherwood Atkinson, Norwood, Ga.—Large copper evaporator for sorghum syrup.

Gas Plant Equipment.—Palmetto Gas & Improvement Co., Darlington, S. C.—Engines, boilers, pumps, contractors' machinery, building materials, electrical equipment.

Generators.—Electrical Equipment & Machinery Co., 714-716 W. Van Buren St., Chicago, Ill.—100 K. W. 220-volt 2-wire D. C. generator, belted type; motor generator set with primary side 220 volts, 60 cycles, 3-phase, and secondary side 220 volts, 2-wire, D. C., size 10 to 15 K. W.

Hardware, etc.—Manuel Alvarez Alonso, Amargura 11, Apartado 2142, Habana, Cuba. To represent mfrs. of and dealers in: Heavy and miscellaneous hardware; cotton-piece goods; men's clothing; ladies' and men's hosiery; shoes; dry goods; paints; canned goods; groceries.

Heating Plant.—See Building Material.

Heating System.—District Commrs., 509 District Bldg., Washington, D. C.—Bids until Aug. 17; install steam-heating boilers, hot-water supply heater, etc., in House of Detention, 15th St. and Ohio Ave. N. W.; plans with Chief Clerk Engr. Dept., 427 District Bldg.

Hoist.—Box 123, Wilmington, N. C.—Small drum cement batch hoist, 1x12 in., with pulley for belt drive capacity up to 1500 lbs.; to lift about 30 ft.

Ice Plant.—Gulf Machinery & Investment Co., New Orleans, La.—15 to 20-ton ice plant; new or second-hand; with or without power.

Ice Plants.—Gas Engine & Electric Co., 282 Meeting St., Charleston, S. C.—Data and dealers' prices on small ice plants, daily capacity 1 ton; power supplied by 8 H. P. internal-combustion engine.

Jetty Construction.—United States Engr. Office, Masonic Temple, Jacksonville, Fla.—Bids until Aug. 15; construct jetty at entrance to St. Johns River; J. M. Braxton, Asst. Engr.; plans on file.

Locomotive.—Harvey Co., 113 South St., Baltimore, Md.—Standard-gauge combination coach and 50 to 55-ton standard-gauge Shay or Climax locomotive.

Locomotives, etc.—R. Amiel, G. N. Spiliotopoulos & Co., 72 Rue St. Lazare, Paris, France.—Data and prices on locomotives, railway cars and material; view to representation.

Locomotives.—Southern Lumber & By-Products Co., Mill Creek, W. Va.—20-ton geared steam locomotive or 2-ton gasoline locomotive.

Machine Tools.—Guyan Machine Shops, Logan, W. Va.—Machine tools, including 1½ or 2-in. capacity bolt machine; shaper, 20-in. stroke or larger; McCabe two-in-one or other type suitable lathe for turning locomotive tires, 36-in. diam.

Metal-working Machinery.—A. Bischoff, Mgr. Southland Metal Co., Lake Charles, La. Machinery for steel tank construction.

Mining Machinery.—Fords Branch Coal Co., L. M. Irwin, Box 123, Pikeville, Ky.—

Prices on mining machinery for daily output 40 tons.

Mining Machinery.—Fort Defiance Coal Corp., R. H. Massey, Mgr., Ansted, Va.—Mining machinery for daily output 250 tons.

Mining Machinery.—Riverview Coal Co., R. B. Wills, Mgr., Ansted, W. Va.—Mining machinery for daily output 100 tons.

Motor.—General Utilities & Operating Co., H. P. Lucas, Treas., 1423 Munsey Bldg., Baltimore, Md.—40 H. P. 1200 R. P. M. 60-cycle 3-phase 2200-volt A. C. motor.

Motors.—Guyan Machine Shops, Logan, W. Va.—Two 100 H. P. 3-phase 60-cycle 2200-volt and one 30 H. P. 3-phase 60-cycle 2200-volt motors.

Motors.—High Point Machine Works, Shelby E. Corbett, Sales Engr., High Point, N. C. Prices on second-hand 75 H. P. 3-phase 60-cycle 2200-volt squirrel-cage motor; 900 R. P. M.; complete with starter, pulley and base.

Organs.—S. M. Findley, Oak Park, Ga.—Names and addresses mfrs. reed and pipe organs.

Paint Machinery.—Emmet A. Jones Co., Birmingham, Ala.—Data and prices on paint factory equipment.

Painting.—Lafayette County Board of Commrs., C. A. Howell, Chrmn., Mayo, Fla.—Bids until Sept. 6 to paint courthouse.

Paving.—Town Board, Ira Fields, Clerk, Poor Fork, Ky.—Bids until Aug. 25; 4870 lin. ft. sidewalk; specifications, etc., on file.

Paving.—Town of St. Matthews, S. C., J. L. Carroll, Mayor.—Bids until Aug. 25; improve highway; 16,128 sq. yds. surfacing with cement concrete, asphaltic concrete or sheet asphalt, both of latter on cement concrete base; 5800 lin. ft. combination concrete curb and gutter; 4000 cu. yds. excavation; 1200 lin. ft. 18-in. storm drain; plans with Town Council, St. Matthews, and Highway Comsn., Columbia, S. C.

Paper Box Machinery.—J. R. Clark Co., J. R. Clark, Mgr., 810 People's Bank Bldg., Lynchburg, Va.—Names and addresses mfrs. paper box or fiber board packing box mchy.

Pipe.—White & Simpson, Contrs., Chatham, Va.—Prices on common vitrified clay and metal pipe.

Pipes.—Palmetto Gas & Improvement Co., Darlington, S. C.—¾ to 3-in. pipes.

Piping, etc.—Arthur M. Loeb & Co., 15 E. 40th St., New York.—Large quantity pipe; rods up to 1 in.; nail wire.

Plumbing.—See Building Material.

Pumps, etc.—East Carolina Railway, Taboro, N. C.—Data and prices on pumps and equipment for handling sand and mud.

Pumps.—See Gas Plant Equipment.

Steel Filing Cabinets, etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 31 to furnish: Steel filing cabinets; hinges; locks; padlocks; dustpans; coal baskets; oilstones; crayons; candles; rattan seat webbing; steel tapes; folding rules; brushes; sash cord; calking cotton; asbestos gaskets; air-brake hose; oakum; wiping rags; rubber valves; packing; writing ink; asbestos, packing, writing and book paper. Blank forms and information (Circular 1399) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Rails.—Fords Branch Coal Co., L. M. Irwin, Prest., Box 123, Pikeville, Ky.—Prices on rails.

Rails.—Charles L. Hills, National Bank Bldg., Wheeling, W. Va.—85 to 90-lb. new or relaying rails in quantity up to 2500 tons.

Rails.—Jerry Run Coal Co., 1025 W. Main St., Grafton, W. Va.—Prices on 20, 30 and 35-lb. steel rails.

Railway Switches, etc.—Jerry Run Coal Co., 1025 W. Main St., Grafton, W. Va.—Prices on No. 10 and No. 8 frog and switch.

Road Construction.—City of Baltimore, Md. Bids until Aug. 18; repair roads at Loch Raven; plans, etc., from Wm. A. Megraw, Water Engr., City Hall.

Road Construction.—Great Southern Lumber Co., J. H. Cassidy, Asst. Gen. Mgr., Bogalusa, La.—Bids until Aug. 16; construct 3 mi. log road; 50,000 cu. yds. earth; 3000 drain boxes; 25,000 cu. yds. overhaul, etc.; plans with J. H. Cassidy.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Aug. 24; construct 19 mi. State Highway; Worcester County, Contract WO22; 31 mi. State Highway through Pocomoke; Worcester County, Contract WO-21; plans, etc., on file. (Lately noted bids until July 28.)

Road Construction.—Monongalia County Court, John M. Gregg, Clerk, Morgantown, W. Va.—Bids until Aug. 24; grade 5000 ft. road from railway station at Monon to Purchfield Run road; place 600 ft. tile or corrugated iron culvert pipe.

Paving.—Sidewalk Improvement District No. 2 Commissioners, E. T. Cashion, Secy., Eudora, Ark.—Bids until Aug. 30; pave 82,910 sq. ft. sidewalks; concrete; specifications with Breckenridge & Daniels, Lake Village, Ark.

Road Construction.—Commrs. Roberts Road Improvement Dist., Jefferson and Arkansas Counties, E. B. Stokes, Humphrey, Ark.—Bids until Aug. 20; 6½ mi. gravel surfaced road from Humphrey to Lonoke County line; Moreland & Bennett, Engrs., Pine Bluff, Ark.

Road Construction.—Frederick County Commrs., Eugene H. Albaugh, Clerk, Frederick, Md.—Bids until Aug. 27; 1.52 mi. road from Monrovia toward Hyattsville; stone; Frederick County, Contract 447; plans, etc., with State Roads Comsn., 601 Garrett Bldg., Baltimore.

Road Construction.—Lee County Commrs., W. S. Turner, Commr., Captiva, Fla.—Bids until Sept. 8; changed date from Aug. 9; 9-ft. shell road; 5280 cu. yds. shell; \$12,000 available; R. P. Ransom, Engr., Fort Myers, Fla.

Road Construction.—Tarrant County, W. E. Yancy, Auditor, Fort Worth, Tex.—Bids until Aug. 14; construct 5.857 mi. State Highway No. 1, known as Bankhead Highway; drainage structures and bridges; plans with State Highway Dept., State Office Bldg., Austin, Tex.

Roofing.—See Building Material.

Saws.—R. Amiel, G. N. Spiliotopoulos & Co., 72 Rue St. Lazare, Paris, France.—Data and prices on cross-cut saws; view to representation.

Separator.—Charles L. Hills, National Bank Bldg., Wheeling, W. Va.—Second-hand Emerick air separator, any size; immediate shipment; wire price and particulars.

Shafting.—Guyan Machine Shops, Logan, W. Va.—Shafting or round steel up to 12-in. diam., any length.

Shoe Machinery.—Wm. A. Burr, Apartado Postal 132, San Luis Potosi, S. L. P., Mexico.—Shoe Machinery.

Steel, etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 30 to furnish: Steel; manganese steel gears; steel boiler tubes; iron or steel chain; duplex pumps; iron rope;

(Continued on page 142.)



Tarvia will save the country's roads—

ALL over the United States there are thousands of road commissioners facing the prospect of having to build new roads at the present high cost of construction.

And all around them are miles and miles of old gravel and macadam roads, not in themselves equal to traffic conditions, but which can be made serviceable if they are repaired and given a Tarvia treatment.

Some Michigan roads, illustrated herewith, show how easily and economically old roads can be salvaged with Tarvia.

One road, for instance, was so

bad that the Township Board decided the only thing to be done was to rebuild it at the cost of a new road, but after seeing results obtained on other roads, decided to patch and treat with "Tarvia-B" and stone chips, and—"the road is better than when new," they say.

It is just as easy for your community to beat the high cost of new roads by saving and restoring your old ones. It is almost a crime to neglect your old roads and let them go from bad to worse, when Tarvia treatment can be applied so easily and cheaply.

Tarvia is a coal-tar preparation for restoring old roads and building new ones. With it you can also

widen your narrow roads by adding Tarvia macadam shoulders. It provides a smooth, dustless, mudless, waterproof, traffic-and-frost-proof roadway at moderate first cost and with the minimum upkeep expense.

"Tarvia-KP" is a cold treatment for patching existing roads of every type. It fills up worn places, restores broken shoulders and edges and keeps the road always at the top notch of condition.

Let our engineers advise you how to salvage your old roads with Tarvia, at very attractive costs.

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Preserves Roads—Prevents Dust

Special Service Department

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by any one interested. If you will write our nearest office regarding your road problems, the matter will be given prompt attention.

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New York	Chicago	Philadelphia	The Barrett Company	Boston	St. Louis	Cleveland
Cincinnati	Pittsburgh	Detroit	Toledo	New Orleans	Birmingham	Kansas City
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Lebanon	Youngstown	Milwaukee	Latrobe	Elizabeth	Buffalo	Baltimore
		Toronto	Winnipeg		Halifax, N.S.	Sydney, N.S.

water buckets; iron or steel pipe; pipe fittings; babbit; brass; copper; bearing metal; yellow metal; solder; nails; staples; nuts; screws; tacks; ball bearings; chisels; milling cutters; dies or chasers; end mills saws; wrenches; handles; lamps; lanterns; oilers; price card stands. Blank forms and information (Circular 1398) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Sugar-mill Machinery, etc.—Union Commercial Co., P. M. Areal, Gen. Mgr., Havana, Cuba.—To represent mfrs. of sugar-mill and general plantation machinery; jute bags for sugar; wrapping paper; paper sacks, newsprint paper; wheat flour; corn meal; rice; brooms; preserves; packing-house products; preserves; shoes, etc.

Tin Shop Equipment.—Texas Tinner's Supply Co., Houston, Tex.—New or second-hand tin shop equipment, including gap slitting shears, squaring shears and forming rolls; immediate delivery.

Vulcanizing Equipment.—American Automotive School, Arthur Stevenson, Mgr., 101 N. Haskell Ave., Dallas, Tex.—Vulcanizing equipment for truck and automobile repairs.

Water-works.—Harry Donkle, care Birmingham Compress Co., Birmingham, Ala.—1200 ft. cast-iron water pipe; 750-gal. underwriters fire pump, good condition, new or second-hand; 50,000-gal. water tank; 75-ft. tower.

Water-works, etc.—Walter H. Taylor, 3d, Director of Public Works, Norfolk, Va.—Bids until Aug. 30; construct pumphouse, dam and road diversion; 150,000 cu. yds. excavation; 3500 cu. yds. reinforced concrete; 13,000 ft. sheet piling; plans on file or with Dabney H. Moore Const. Engr., 1445 Monadnock Block, Chicago.

Woodworking Machinery.—Thos. Y. Hamblon, High Point, N. C.—Data and prices on mchy. to mfrs. fruit crates and baskets.

Woodworking Machinery.—Southern Pine & Hardwood Co., 219 Jefferson County Bank Bldg., Birmingham, Ala.—Woodworking mchy., including medium-size self-feed rip-saw, 20-ft. 2-saw trimmer, 10 or 12-in. moulder, 24-in. knife grinder, 40-ft. 3-in. shaft with boxes, 6 lumber dollies, 45 or 50-in. exhaust fan, with or without pipe connections; pulleys, hangers, etc.; immediate delivery.

Railroad Construction

Railways.

N. C., Sylva.—Tuckasegee & Southeastern Ry. Co. chartered, with \$300,000 authorized capital stock and \$35,000 paid in, to build a line from Sylva to Lake Toxaway, N. C., 35 miles. Incorporators, James E. Walker, Roanoke, Va.; Joseph Keys, Washington, D. C.; C. W. Pierce, Graham, Va.; V. R. Rieley and N. M. Davidson of Sylva, and Felix R. Alley of Waynesville, N. C.

Tex., Paris.—\$100,000 receiver's certificates for immediate improvements reported approved for the Paris & Mount Pleasant R. R. by the Texas R. R. Comsn., R. M. Wortham being receiver.

Tex., Wayland.—Contract reported let for 3½ mi. extension of Ringling, Eastland & Gulf R. R. from Wayland to connect with Wichita Falls, Ranger & Fort Worth R. R., work to be finished in 30 days. C. H. Chamberlain is Ch. Engr. at Eastland, Tex.

Va., Graham.—Tazewell Timber Corp. is reported about to build a railroad about 15 mi. long from Burkes Garden to near Gratton, for which rail is being delivered at Burkes Garden.

W. Va., Malden.—Georges Creek Coal Corp., Charleston, W. Va., reported will build 1 mi. railroad spur from Malden to mines, establishing connection with Kanawha & Michigan Rwy. L. Harris, Prest.; J. M. Harris, Secy. of the coal company, both of Bay City, Mich.

will supply the Canadian market through an extensive warehousing system pending the erection of the additional plants. The sites for these additional plants have been secured at Montreal, Winnipeg, and other points.

To Open Branch Offices in Florida.

Horst & Co., Incorporated, dealers in investment securities, Washington, D. C., who are handling the financing of the Florida Finance Corporation of Tampa, are reported to be planning to open branch offices in Tampa, Jacksonville and Miami. The Florida Finance Corporation has an authorized capitalization of \$1,000,000, and is organized for the purpose of financing and underwriting Florida business enterprises. Officials of the company are among the most reputable business men of Tampa, and include D. C. Gillett, president, B. L. Hamner, first vice-president, and V. W. Helm, secretary and treasurer.

Important Sale of New Material.

A large sale of belting, hose, copper wire, rope, packing, belting supplies, copper nails and sheet copper is announced to take place at 19 A. M. Thursday, September 2, at the salesrooms of the auctioneers, Samuel T. Freeman & Co., 1519-21 Chestnut St., Philadelphia, Pa. It is further stated that the sale consists entirely of new material, surplus supplies, etc., from a large manufacturer. Quantities and full details are stated in the formal announcement in another column. Catalogs will be supplied.

Department Manager Appointed.

Exum M. Haas, railroad specialist, it is announced, has been appointed manager of the railroad department of the H. K. Ferguson Company, engineers and builders, Cleveland, O. Mr. Haas is a graduate of Purdue University, Class of 1905. For eight years after completing his engineering course he was actively engaged in railroad maintenance and construction. Then for several years he was western editor of the Electric Railway Journal, and from 1917 to 1920 sales engineer for the Austin Company. He is a member of the American Society of Civil Engineers, the American Railway Engineers' Association and the committee on shops and terminals.

Unique Work With an Electric Drill.

A Cleveland manufacturer reports the Van Dorn Electric Tool Co. of that city planned to erect a mezzanine floor supported by 28 iron columns, to anchor which securely at the bases it was necessary to cut square openings through the floor 15x18 inches. The flooring was of ¾-inch matched hardwood laid on 2-inch planks, both in a heavy concrete base. Sawing was impossible, but by drilling a hole at each corner and then chipping with hammer and chisel two men cut out the first opening in about 4½ hours. Then the happy thought came of drilling the entire opening with a ½-inch Van Dorn electric drill, and by this method the remaining 27 holes were cut out with an average time of exactly one-third of the first method. Had this change not been made, it would have required twelve 10-hour days for two men to complete the job, but with the drill the entire work was finished in just four 10-hour days. Thus 80 hours were saved, at the rate of \$1.35 per hour, or a total money saving of \$108. The drill was the "Van Dorn" Code D-400, which sells for \$116, and it had earned within \$8 of its cost in just four days' operation.

(Continued on page 144.)

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Important Industrial Consolidation.

The Austin Machinery Corporation of Chicago and New York has announced the consolidation of the F. C. Austin Machinery Co., Inc.; the Linderman Steel & Machine Co., the F. C. Austin Drainage Excavator Co., the Toledo Bridge & Crane Co., the Municipal Engineering & Contracting Co., and other large manufacturers of kindred lines with plants at Toledo, O.; Muskegon, Mich.; Winthrop Harbor, Ill., and Woodstock, Ont. It is further stated that the combined energy and capacity of these organizations will be devoted to mass production of a complete line of earth-moving and concrete mixing machinery to meet the requirements of an unprecedented period of construction, good road making, reclamation, excavation and irrigation.

Two New Offices Opened.

The Oxweld Acetylene Co., manufacturers of oxy-acetylene welding and cutting apparatus, have established Pacific Coast sales and distributing headquarters at San Francisco, with offices at 1077 Mission St. Additional sales representatives' offices are maintained as follows: Los Angeles, 646 Maple Ave.;

Salt Lake City, 908 Kearns Building; Portland, 90 First St.; Seattle, 433 Pioneer Building. Lee Romney, with headquarters at San Francisco, is Pacific Sales Manager. This territory was formerly served from Chicago and Los Angeles, but removal of headquarters to San Francisco became necessary to secure a more central location. The export department of the company, formerly located at the factory in Newark, N. J., has been removed to the Carbide and Carbon Building, 30 E. 42d St., New York. The department has been reorganized and is now under the direction of R. G. Noble, who will co-operate with the general sales department.

Oxygen from the Air.

One of the most important announcements bearing on Canada's industrial development is that of the Dominion Oxygen Co., Ltd., promising erection of a chain of plants for separating oxygen from the atmosphere. The first of these plants will be in five of Canada's industrial centers, and service stations will be established throughout that country to supply oxygen users wherever there is a demand for the gas. The first of these plants has already been completed at Toronto. It

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

A trencher that digs anything diggable

"ON THE JOB" is where Austins made their name; their steady, dependable performances under circumstances that kill other machines are what make them the choice of hard headed contractors; they do the work of a whole crew of men.

Austins are equipped with buckets that'll dig anything that's diggable. And they'll come up clean after every revolution.

There's a special cleaning device that does the business; you can bank on it to end the costly delays for bucket cleaning. If a boulder is struck, the heavy drive belt and idler pulley take the shock without damage to the machine.

You ought to investigate Austins; our free 102-A Catalogue will interest you; write for it.



AUSTIN MACHINERY CORPORATION

F. C. AUSTIN CONSOLIDATION

CHICAGO: Railway Exchange Bldg.

NEW YORK: 30 Church St.

ATLANTA: 10 W. Harris St.

In New Location.

The Wyatt Metal & Boiler Works, Dallas, Tex., changed the location of their plant this last spring to a place on West Dallas Pike, where they have erected two commodious buildings. One of them is 125x205 feet, for tanks and heavy plate work, while the other is 90x180 feet, for light tanks and metal culvert. The buildings are thoroughly equipped with sheet metal machinery and an overhead electric crane. The culvert is the "Armco" galvanized and corrugated, and in carrying out their belief in the merit of the rust-resisting metal the company placed the "Armco" corrugated iron roofing on their buildings.

Consulting Engineer Appointed.

Charles O. Lenz, consulting engineer, 120 Broadway, has been made one of the consulting engineers for the Foundation Company of New York City.

LENS

Good Business South.

J. S. Bone, president of the Oconee Brick & Tile Co., Milledgeville, Ga., says that conditions with them are very good and business has grown largely, due in a great degree to the advertisements in the MANUFACTURERS RECORD. Outside of the coal situation they have nothing to complain of.

New Flashlight and Starting Battery.

Eugene Elkins, Corsicana, Tex., writes to the MANUFACTURERS RECORD reporting that a new electric flashlight and starting battery, invented by the late Richard Joseph Crowley, has been made into marketable shape. It is called the Crowley-Elkins battery, and will, it is claimed, give higher voltage and more brilliant light than usual. Also that it will give 2.5 volts per cell, and it can be recharged wherever electricity is installed. A cheap electric lamp device is provided to make connection with a house circuit for recharging. This may be applied to starting batteries for gas engines and automobiles. Mr. Elkins, in conclusion, says that Mr. Crowley's specifications for the battery have been proved up to the letter upon practical

application. Samples have been made up which show as high as three volts per cell. United States patents have been applied for, and foreign patents will soon be taken out.

Trade Literature.**Concrete Construction Mixers.**

"Koehring Construction Mixers" is the title of a large and handsome catalog issued by the Koehring Machine Co., Milwaukee, Wis., manufacturers of concrete mixers, mixer loaders, rotary graders, bar cutters and bar benders. This is Catalog 22 and it has 95 pages replete with data, including tables of sizes and capacities, fine illustrations in abundance, and practical suggestions. It is stated that these "are extra yardage mixers because every operation of getting materials into the drum and delivering concrete into the forms is accelerated by mechanical high speed, made possible by automatic action and centralized, simplified control," etc.

To Secure Proper Illumination.

The Luminous Specialty Co., Indianapolis, Ind., has put out a booklet on its "Eye-Shield Diffuser." It mentions facts and figures to show the value of diffused illumination for increased production in factories and the place which such a device has in offices, showrooms, reading rooms, etc. Coupled with it is a description of the invention, with an illustration showing the ease and simplicity of installation. The booklet is well illustrated and contains views of interior illumination. It is sent to all who may be interested.

Concrete House Construction.

An official report of the proceedings of the National Conference on Concrete House Construction, which was held at the Auditorium Hotel, Chicago, on February 17, 18 and 19 last, has been issued from the office of the secretary, A. J. R. Curtis, 111 W. Washington St., in that city. It makes a substantial book of 235 pages which are full of important and interesting material of great value to everyone concerned with the use of concrete

for the erection of buildings. It contains many illustrations accompanied by complete descriptions, and there are also numerous diagrams showing details of construction. Various types of concrete construction are considered, and the data presented is extremely enlightening and practical. A picture of especial interest is one on page 116, showing the residence of reinforced concrete which was built at Port Chester, N. Y., by W. E. Ward in 1872, nearly half a century ago and which, it is stated, is still in excellent condition, giving "every evidence that the end of the next 50 years will find it in the same condition as today." Another illustration shows a group of concrete dwellings at Allentown, Pa., which were erected in 1880 and which are apparently as good as the day they were completed.

Modern Factory Buildings.

J. E. Sirrine & Co. of Greenville, S. C., and 331 Madison Ave., New York, have issued another of their timely booklets, "Factories for the Future," which presents a cogent argument for improved factory buildings, in the course of which it remarks that "Today the factory owner or manager recognizes that the buildings which constitute his plant are his most effective production tools. He knows that the design, the arrangement and materials for each structure are not things to be selected without study and thought." Twenty or more illustrations of modern plants accompany the descriptive matter.

New Refrigerating Plant.

Bulletin No. 6 of the Norwalk Iron Works Co., South Norwalk, Conn., relates to the Norwalk refrigerating plant which, it is stated, is "entirely new in design and built for maximum efficiency in any capacity from one-quarter ton upwards." Special attention is directed to its broad range of capacities, its sanitary features and convenience, and the fact that it is particularly adapted to meat markets. The plant can be used for ice making. Fine illustrations accompany the descriptions of its construction and operation.

(Continued on page 146.)

The Oscar T. Smith Company

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Capital and Surplus
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Total Resources
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Large enough to handle your biggest problems, but not too large to be interested in your smaller ones.

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FIRST NATIONAL BANK
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Also Entire Issues of Bonds of
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Largest Capital and Surplus of Any Financial
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Established 1884

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OF BALTIMORE**

A. H. S. POST, President. F. G. BOYCE, JR., Vice-President.

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Transacts a General Trust and Banking Business

Correspondence and interviews invited

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HAVE YOU BONDS FOR SALE?

WE BUY ALL CLASSES OF MUNICIPAL BONDS,
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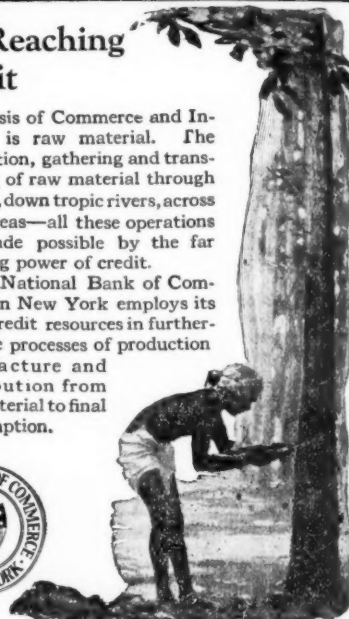
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**Far Reaching
Credit**

The basis of Commerce and Industry is raw material. The production, gathering and transporting of raw material through jungles, down tropic rivers, across many seas—all these operations are made possible by the far reaching power of credit.

The National Bank of Commerce in New York employs its great credit resources in furthering the processes of production manufacture and distribution from raw material to final consumption.



**National Bank of Commerce
in New York**

Capital, Surplus and Undivided Profits
Over Fifty-five Million Dollars

Industrial Efficiency.

"Science in Industry" is a booklet issued by M. H. Avram & Co., Incorporated, 360 Madison Ave., New York. It deals with the subject of efficiency in industrial plants, and shows how competent industrial engineering can be applied so as to turn losses into profits, at comparatively small expense. The argument is attractively presented and is easy to read.

An Important Publication.

A second series of "For Better Public Relations" has been issued, presenting in booklet form 10 advertisements published in the interest of the electrical industry and public utilities by the Western Electric Co., Inc. Since this campaign of special advertising began some months ago, President C. G. Du Bois says that the mail has brought expressions of hearty endorsement from all divisions of the industry in all sections of the country, and that this warranted the company in believing that it had been a success. Furthermore, it has won the approval of many of the foremost men in the industry. Among the subjects considered in these advertisements are the use of water-power to produce electric current, the need of increased rates of fare for electric railways, city and suburban; the need for the best engineering skill in building development, the manifold uses of electricity in homes, the reason why advances are required in electric-light and power rates, etc. The arguments are presented convincingly and interestingly, displaying a disposition to fully consider the interests of the public as well as the needs of the average electric company or other public utility.

Canning Trade Almanac.

The Canning Trade Almanac for 1920, compiled by "The Canning Trade," Baltimore, Md., contains statistics of the vegetable and fruit packs of the United States, tables showing the range of prices and much other data not easily obtainable elsewhere. It is edited by A. I. Judge. The National Pure Food Law is given a prominent place in the book, and it is immediately followed by important facts given out by the United States Department of Agriculture, after which come weight or measure branding laws of various States. The other facts presented in this book of nearly 150 pages will also be found valuable to canners, farmers and others in any way connected with the trade.

"Path-Digging" Wagon Loader.

"The Material Handler," Vol. 2720, issued by the George Haiss Manufacturing Co., 141st St. and Rider Ave., New York City, describes the Haiss "Path-Digging" wagon loader, and the cover page shows the patented self-feeding propeller blades digging a path into crushed stone. There are also three other excellent pictures with appropriate descriptions.

A New Illumination Handbook.

The "Holophane Datalog" is the name of a 128-page illustrated illumination handbook that has been published by the Holophane Company New York. It was compiled from the large volume of lighting data accumulated by the company's engineering department in its 25 years of active illumination work, and is a complete and up-to-date authoritative manual. As the name "Datalog" implies, the book is a combined data-book and catalog. The first 68 pages give detailed information on engineering subjects, and the remaining 60 pages show cuts, photometric curves, dimensions, recommended lamp sizes, spacing and mounting height recommendations and details of installation for various

types of lighting units. These latter include the entire lighting field, and are grouped under the following sections: General lighting, industrial lighting, commercial lighting, miscellaneous, street lighting, house lighting, decorative lighting, gas lighting, railroad lighting, fittings. There are also 46 reproductions of night photographs showing actual installations and giving details. A very limited number of these books is available for distribution to those particularly interested.

Culverts.

A handsome catalogue—No. 3—has been issued by the Cantor Culvert & Silo Co. of Canton, Ohio, concerning the "Acme" (nestable) corrugated metal culverts. The front cover page bears a fine, artistically colored picture showing one of these culverts in the embankment of a railroad. Within there are many other illustrations of other actual installations. The metal of which the culverts are manufactured is called "No-Co-Ro," and the results of tests are given to show that it actually resists rust. The word nestable applied to these culverts because they are made in two sections (upper and lower) and can therefore be packed closely, making them easy to ship and easy to handle, while this feature in no degree lessens efficiency. It is stated that they last indefinitely. There are many hearty testimonials about them.

An Excellent Publication.

One of the excellent house organs of this country is that issued by the Briggs-Weaver Machinery Co., Dallas, Tex. The number for July is particularly devoted to the cottonseed-oil interests, and the articles, illustrations and comments on men who are prominent in the industry will appeal with force to those who are making a real business out of what was first a waste material, then a by-product. Other articles cover paper-making, with a suggestion of the utilization of some of the South's materials as a substitute for wood, and the editor has a running comment on persons and things that has a real human touch.

BOOK REVIEWS.

"A Town to Be Operated for the Benefit of Animals and as an Object-Lesson in Good Government." By Charles L. Delbridge. The Delbridge Company, St. Louis, Mo.

The author of this little book expresses the belief that man's brutal treatment of the lower types of animal life has almost destroyed his ability to reason and that the establishment of a town in which brutal treatment of animals would be followed by expulsion of the offending individual would stop such deeds, and furthermore (the town not being collectively owned), there would be a superior local government, freedom from crime and generally satisfactory living conditions for decent people and the bringing up of their children. That the author means well is plain, but that his plans are idealistic in the extreme is likewise obvious. Nevertheless, he has written a very interesting book, which can be perused in comparatively few minutes, and which will start some thinking on the part of readers.

Financial News

New Financial Corporations.

Ga., Cedartown.—Liberty National Bank, absorbing the Farmers and Mechanics' Bank,

capital \$100,000, surplus \$20,000, has been organized. W. M. Sasser, Prest.; J. H. Barnes and H. M. Hall, V.-P.'s; W. E. Bowden, Cash.

Ky., Whitesburg.—First State Bank, capital \$25,000, is incorporated. M. D. Lewis, Stephen Combs, Jr., E. B. Hale and others.

Miss., Lambert.—Bank of Lambert has been organized to begin business Sept. 1. A. B. Sheldon, Prest.; W. P. Holland and W. M. Robb, V.-Ps., and E. H. Carnes, Cash.

Mo., Kansas City.—Industrial State Bank, capital stock \$100,000, surplus \$10,000, is organized to begin business at Independence and Hardesty Aves. C. A. Jarvis, Prest.; J. H. Simms, V.-P.; J. H. Gentry, Secy., and Harry Lewis, Treas.

N. C., Ashboro.—Ashboro Bank & Trust Co., authorized capital \$100,000, paid in \$40,000, is chartered. H. T. Caviness, Prest.; Hugh Parks, V.-P.; E. H. Morris, Cash.

N. C., Charlotte.—Fifth Street Industrial Bank, authorized capital \$100,000, paid in \$25,000, has been organized, to begin business at 13 E. 5th St. J. J. Misenheimer, W. E. Price, W. L. Jenkins and others.

N. C., Elizabeth City.—Albemarle Bank, a negro bank with \$25,000 paid-in capital, will open for business Aug. 14. Dr. E. L. Boller, Prest.; W. H. Holland, Cash.

N. C., Franklinville.—Bank of Franklinville, capital stock paid in \$15,000, opened for business Aug. 5. M. H. Birkhead of Ashboro, Cash.

N. C., King.—Farmers and Merchants' Bank, authorized capital \$25,000, paid in \$5,000, is incorporated. J. T. Smith, W. E. Hartman, J. R. Bower and others.

Okla., Ravia.—First National Bank, capital \$25,000, has applied for charter. James H. Wilkinson and others.

S. C., Kingsbury.—A bank with \$50,000 capital stock and \$17,000 paid in has been organized to begin business within the next few weeks. T. J. Cottingham, Prest.; S. J. Eaddy, V.-P.

Tex., Lohn.—Lohn State Bank, capital stock \$30,000, is chartered; J. K. Shelton, Prest.; W. F. Roberts, Jr., Cash.

Tex., Roscoe.—Farmers' State Bank, capital stock \$25,000, is organized. S. F. Neely, Prest.; W. C. Cress, V.-P.; S. P. Smith, Cash.

New Securities.

Ala., Fairfield.—(School).—All bids were rejected for the \$42,500 of 6 per cent \$100 denomination 10-yr. bonds dated Aug. 1 and offered Aug. 9. A. Clinton Decker is Mayor.

Ark., Newport.—(Drainage).—Sold to Whitaker & Co. of St. Louis \$135,000 of 6 per cent \$1000 denomination 1926-1940 bonds of Jackson County Drainage Dist. No. 8, dated Mch. 1, 1920.

Fla., Bradentown.—(Road).—Election Sept. 7 on \$200,000 of Manatee County bonds. Address County Commrs.

Fla., De Land.—(School).—Bids will be received until noon Aug. 27 for \$30,000 of 6 per cent \$500 denomination 20-year bonds of Volusia County Special Tax School Dist. No. 12, dated July 1, 1920. Address V. W. Gould, Chrmn. Board Public Instruction.

Fla., New Smyrna.—(Light Plant).—Election Sept. 7 on bonds for electric-light plant. Address The Mayor.

Fla., Seabreeze.—(Street, Drainage).—Bids will be received until Aug. 23 for \$75,000 of 8 per cent certificates of indebtedness, dated

May 8, 1920. Address R. D. L. Graves, Town Treas.

Fla., St. Petersburg—(Fire Equipment, Light).—Sold to the First National Bank, Central National Bank and Bank & Trust Co., at par and accrued interest, \$55,000 (part of \$488,000 issue) of 5½ per cent \$1000 denomination 30-yr. bonds, dated June 1, voted June 18 and offered Aug. 10. The remaining \$433,000 probably will be taken by usual investors.

Fla., St. Petersburg—(Improvement).—Sold to three local banks, \$55,000 of the \$488,000 of 5½ per cent \$1000 denomination 30-year bonds, offered Aug. 10, the remainder of the bonds being unsold. Address G. B. Shepard, Director of Finance.

Ga., Albany—(Municipal).—Bids received until noon Aug. 23 for \$60,000 of 5 per cent \$1000 denomination 29-year bonds, dated Aug. 1 1920. Address H. A. Peacock Mayor. For particulars see *Proposals Department*.

Ga., Darien—(Road).—Election Sept. 8 on \$15,000 of 6 per cent \$500 denomination McIntosh County bonds, dated Nov. 1, 1920. Address J. G. Legare, Clk. Board County Supvs.

Ga., Dudley—(School).—Bids will be received until 10 A. M. Sept. 5 for \$15,000 of 6 per cent \$100 and \$1000 denomination bonds of Dudley School Dist., dated June 1 and voted May 12. Address T. J. Gilbert, Secy. School Board.

Ga., Plains—(School).—Election Aug. 17 on \$50,000 of bonds. Address School Board.

Ga., Swainsboro—(Sewer).—\$75,000 of \$1000 denomination bonds dated May 1, 1920, are being offered by the Robinson-Humphrey Co. of Atlanta.

La., Colfax—(Road).—Sold to the Hanover Bank of New York City, \$140,000 of Road Dist. No. 8, Grant Parish, bonds.

La., Oak Grove—(School).—Election Aug. 31 on \$35,000 of School Dist. No. 8, West Carroll Parish, bonds. Address School Board.

La., Plaquemine—(School).—Election Sept. 9 on \$25,000 of 5 per cent 5-year bonds of School Dist. No. 3, Iberville Parish. Address Joseph Wilbert, Prest. Parish School Board.

La., Vivian—(Street).—Bids will be received until 8 P. M. Sept. 7 for \$34,000 of 5 per cent bonds. Address F. B. Rieves, Town Clk.

Md., Aberdeen—(Sewer, Water).—\$100,000 of bonds have been voted. Address The Mayor.

Md., Annapolis—(Road).—Special dispatch to Manufacturers Record says: All bids for \$1,500,000 State bonds declined by Board of Public Works, highest bid being \$3,183 by Alexander Brown & Sons of Baltimore. John M. Dennis is State Treasurer. (These are 4½ per cents.)

Md., Easton—(Road).—\$200,000 of 5½ per cent, \$1000 denomination, serial 1923-1935 bonds of Talbot County, dated Aug. 15, are being offered by Baker, Watts & Co., Townsend Scott & Son and Nelson, Cook & Co., all of Baltimore.

Md., Hagerstown—(School and Road).—Bids will be received until Aug. 18 for \$490,000 of 5 per cent Washington County bonds offered unsuccessfully on June 22. Address County Comms.

Miss., Cleveland—(School).—Sold to the Mortgage Trust Co. and the National Bank of Commerce, both of St. Louis, \$75,000 of 6 per cent \$1000 denomination 20-yr. bonds of Shaw Consolidated School Dist., Bolivar county, dated Aug. 1.

Miss., Ellisville—(School).—Bids will be received until Aug. 18 for \$2000 of Sweetwater Public School Dist. bonds. Address School Board.

Miss., Gulfport—(School, Improvements).—Sold to the First National Bank, at par \$60,000 of 20-year bonds.

Miss., Indianola—(Road).—\$100,000 of 6 per cent, \$1000 denomination, serial 1921-1945 bonds of Sunflower County Supervisors' Dist. No. 5, dated July 1, 1920, are being offered by the Bank of Commerce & Trust Co., Memphis, Tenn.

Miss., Jackson—(State).—The \$250,000 of 5½ per cent 25-yr. State-improvement bonds offered Aug. 11 were not sold, but will probably be sold at private sale at par and interest in a few days. Frank Roberson is Atty.-Gen.

Miss., Macon—(Road).—Election Aug. 23 on \$110,000 of Supvs.' Dist. No. 1, Noxubee County, bonds. Address Board of Supvs.

Miss., Macon—(Road).—\$10,000 of 6 per cent \$500 denomination bonds of Road Dist. No. 1, Noxubee County, are being offered by the Merchants & Farmers' Bank, Macon.

Miss., Moss Point—(Bridge).—Bids will be received at any time for \$10,000 of 6 per cent bonds. Address C. M. Fairley, City Clk. For particulars see *Proposals Department*.

Miss., Oxford—(Light and Water Plant).—Election Aug. 27 on not exceeding \$30,100 of 6 per cent bonds. Address The Mayor.

Miss., Senatobia—(School).—\$12,000 of 6 per cent bonds are being offered by D. C. Lauderdale, Atty.

Miss., Sumner—(Drainage).—Bids will be received until 2 P. M. Aug. 19 for \$140,000 of 6 per cent, serial 1920-1939 bonds of Blue Lake Drainage Dist. Address Hays, Stringly & Whitten, Attorneys.

Miss., Tchula—(Street).—\$10,000 of bonds have been voted. Address The Mayor.

Mo., Carthage—(Water).—Sold to the W. R. Compton Company of St. Louis, at \$300 premium, \$100,000 of waterways bonds.

Mo., Carthage—(School).—Sold to Kauffman, Smith, Emert & Co. of St. Louis \$150,000 of 6 per cent \$1000 denomination bonds, dated May 1, 1920.

Mo., Joplin—(Sewer).—Sold to Prescott & Snider and Stern Bros. & Co., both of St. Louis, \$291,500 of 6 per cent \$500 and \$1000 denomination 20-yr. bonds dated June 1 and offered unsuccessfully on May 4.

Mo., Herman—(School).—\$8000 of Herman School Dist. No. 3 bonds have been voted. Address School Board.

N. C., Greensboro—(Station).—A bill will be introduced in the General Assembly authorizing a bond issue of not exceeding \$1,300,000 for passenger station. Address The Mayor.

N. C., Hertford—(Road).—Contemplated to issue \$300,000 of Perquimans County bonds. Address County Comms.

N. C., Kernersville—(School).—Contemplated to issue school bonds. Address Prof. J. M. Weatherly, Principal Kernersville School.

N. C., Monroe—(Road and Bridge).—Bids will be received until Sept. 6 for \$150,000 of serial 1-30-year Union County bonds. Address M. C. Long, Clerk Board Comms.

N. C., Rocky Mount—(Paving).—Contemplated to issue \$650,000 of bonds. Address The Mayor.

N. C., Wilmington—(School).—Sold to Powell, Garard & Co. of Chicago at par and interest \$175,000 of 5 per cent serial \$1000 denomination bonds, dated Jan. 1 and offered July 15.

S. C., Anderson—(School).—\$10,000 of Iva School Dist., Anderson County, bonds have been voted. Address County School Board.

S. C., Gaffney—(School).—\$4000 of 6 per cent Draytonville School Dist., Cherokee

County bonds are being offered. Address E. B. Spencer, School Trustee.

Tenn., Benton—(Road).—Voted Aug. 12, \$200,000 of Polk County bonds. Address County Comms.

Tenn., Jackson—(School, Street, Sewer, Water).—Voted Aug. 9 \$151,000 of 6 per cent \$1000 denomination 10-year bonds. Address J. D. Johnson, Mayor.

Tenn., Lebanon—(Road).—\$900,000 of Wilson County bonds failed to carry at the election Aug. 5. E. G. Walker is County Judge.

Tenn., Smithville—(Light and Power).—Bids will be received until Aug. 14 for \$30,000 of 6 per cent \$1000 denomination 20-year bonds, dated Aug. 1, 1920. Eugene Hendon is Mayor.

Tex., Alpine—(Water, Sewer).—\$15,000 water and \$20,000 sewer 5½ per cent serial bonds have been approved by the Attorney-General. Address The Mayor.

Tex., Austin—(School).—The State Board of Education has purchased \$232,650 of bonds.

Tex., Eastland—(Sewer, Water).—\$400,000 of 6 per cent \$1000 denomination 20-40-year optional bonds, dated July 1 and voted March 6, are being offered for sale. Address W. Lander, City Mgr.

Tex., Lufkin—(Road).—Bids received until 2 P. M. Aug. 9 for the following Angelina County bonds: \$60,000 of 5 per cent 10-40-year optional Redland Road Dist. No. 2, and \$75,000 of 5½ per cent 40-year Road Dist. No. 2 bonds. Address E. B. Robb, County Judge.

Tex., Refugio—(Road).—The \$30,000 of 5½ per cent Refugio County bonds offered Aug. 9 were not sold. Address J. Turner Vance, County Judge.

Tex., Sherman—(School).—Voted Aug. 7 \$5000 of Fairview Independent School Dist. bonds. Address School Board.

Tex., Tahoka—(School).—Bids will be received until Oct. 1 for \$30,000 of 5 per cent \$1000 denomination 40-year bonds, dated Aug. 1 and voted July 27. Address J. E. Stokes.

Tex., Texarkana—(Paving).—Sold to Bolger, Mosser & Willman of Chicago for par plus interest \$300,000 of 5-20-year optional bonds.

W. Va., Martinsburg—(School).—Election Aug. 23 on \$36,000 of 6 per cent \$100 denomination bonds of Falling Waters School Dist., Berkeley County, dated Sept. 1. Address John D. Landis, Prest. Board of Education.

W. Va., Spencer—(Road).—No bids were received for the \$67,000 of 5½ per cent \$500 denomination 20-yr. bonds of Reedy Dist., Roane county, offered Aug. 10. Address W. A. Carpenter, County Clerk.

Financial Notes.

First National Bank of Brownfield, Tex., has increased capital stock from \$25,000 to \$50,000.

First National Bank of Coeburn, Va., has increased capital from \$50,000 to \$100,000.

Farmers' Bank of Simpsonville, S. C., has increased capital stock from \$12,500 to \$25,000.

United States Trust Co. of Jacksonville, Fla., has increased capital stock from \$50,000 to \$100,000.

Myersville Savings Bank, Myersville, Md., has increased capital stock from \$15,550 to \$25,000.

Farmers & Merchants' Natl. Bank of Henderson, Tex., has increased capital from \$25,000 to \$100,000.

Glenwood Bank of Charleston, W. Va., will increase capital stock from \$50,000 to \$75,000.

American Exchange National Bank, Greensboro, N. C., will increase capital from \$400,000 to \$1,000,000.

PROPOSALS

BOND ISSUES
BUILDINGS
PAVING
GOOD ROADS

Bids close September 3, 1920.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., August 12, 1920. Sealed proposals will be received at this office until 3 P. M. September 3, 1920, and then opened, for new mezzanine floor in Postoffice, Scranton, Pa., in accordance with drawing No. M. C.-73 and 325 and this specification, copies of which may be had at the office of the Custodian or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 31, 1920.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., August 4, 1920. Sealed proposals will be opened in this office at 3 P. M. August 31, 1920, for Toilet-rooms in the United States Marine Hospital at St. Louis, Mo., in accordance with specification and drawing, copies of which may be had at this office or at the office of the Custodian, St. Louis, Mo., in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 31, 1920.

PROPOSALS FOR STEEL FILING CABINETS, Hinges, Locks, Padlocks, Dustpans, Coal Baskets, Oilstones, Crayons, Candles, Rattan Seat Webbing, Steel Tapes, Folding Rules, Brushes, Sash Cord, Calking Cotton, Asbestos Gaskets, Air-brake Hose, Oakum, Wiping Rags, Rubber Valves, Packing, Writing Ink, Asbestos Paper, Tracing Paper, Writing Paper and Book Paper. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock A. M. August 31, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1399) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close August 26, 1920.

PROPOSALS FOR FIVE RETURN-FLUE BOILERS FOR U. S. S. CHISCA. Office Mississippi River Commission, 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. August 26, 1920, and then opened, for furnishing and delivering five return-flue boilers for U. S. S. Chisca. Further information on application.

Bids close August 26, 1920.

PROPOSALS FOR STEEL HULL FOR U. S. S. CHISCA. Office Mississippi River Commission, 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. August 26, 1920, and then opened, for furnishing one steel hull for U. S. S. Chisca. Further information on application.

Bids close September 15, 1920.

U. S. ENGINEER OFFICE. Jacksonville, Fla. Sealed proposals will be received here until 12 M. September 15, 1920, and then opened, for jetty construction at entrance to St. Johns River, Fla. Information on application.

Bids close September 7, 1920.

OFFICE OF THE CONSTRUCTING QUARTERMASTER, Savanna Proving Ground, Savanna, Illinois. Sealed proposals will be opened at this office on September 7, 1920, at 11 o'clock A. M., for construction of 47 ordnance storage magazine buildings, 30 standard magazines for high explosives, barrack buildings, re-packing-houses, stables, fencing, etc., together with utilities. Plans and specifications may be had upon application to this office or the Office First District, Construction Service, War Trades Building, Washington, D. C.

Contractors submitting proposals should visit the site.

Bids close August 31, 1920.

\$30,000 6% Courthouse and Jail Bonds

McCormick, S. C.

Sealed bids will be received by the Town Council of the Town of McCormick, South Carolina, until 12.30 o'clock P. M. August 31, 1920, on Thirty Thousand Dollars Six Per Cent. Courthouse and Jail Buildings Bonds for McCormick County, at which time said bids will be opened. The bonds to be dated September 1, 1920; to be in denomination of Five Hundred Dollars, and to be due and payable in accordance with following schedule:

November 1, 1921.....	\$1,000.00
November 1, 1922.....	1,000.00
November 1, 1923.....	1,000.00
November 1, 1924.....	1,000.00
November 1, 1925.....	1,000.00
November 1, 1926.....	1,000.00
November 1, 1927.....	1,500.00
November 1, 1928.....	1,500.00
November 1, 1929.....	1,500.00
November 1, 1930.....	1,500.00
November 1, 1931.....	1,500.00
November 1, 1932.....	1,500.00
November 1, 1933.....	1,500.00
November 1, 1934.....	1,500.00
November 1, 1935.....	2,000.00
November 1, 1936.....	2,000.00
November 1, 1937.....	2,000.00
November 1, 1938.....	2,000.00
November 1, 1939.....	2,000.00
November 1, 1940.....	2,000.00

\$30,000.00

Interest at 6 per cent. per annum on said bonds to be due and payable semi-annually on the first days of May and November of each year.

A certified check of \$500, payable to T. L. Edmunds, Secretary and Treasurer of Town Council, Town of McCormick, is required deposited with sealed bid.

For further information in regard to these bonds address all communications, as well as bids, to T. L. Edmunds, Secretary and Treasurer of Town Council of Town of McCormick.

T. L. EDMUNDS,

Secy. and Treas. Town Council,

Town of McCormick,
South Carolina.

August 4, 1920.

Bids close August 26, 1920.

\$47,500 Street and Sidewalk Bonds

Sealed bids will be received on the 26th day of August, 1920, at 3 o'clock P. M., in Council Chambers at Woodruff, S. C., for \$47,500 of street and sidewalk improvement bonds of said town, bearing interest at the rate of 5% per cent. per annum, payable semi-annually, due forty (40) years after date, with the privilege of retiring same after twenty (20) years, and bearing date July 1, 1920. The Town Council reserves the right to reject any and all bids made. All bids should be filed with the undersigned on or before the date above mentioned.

W. H. SHANKLIN,

Clerk and Treasurer,
Woodruff, S. C.

Bids close August 22, 1920.

\$23,000 6% Street Bonds

Vanceboro, N. C.

Bids will be opened August 22 for \$23,000 of 6 per cent. town bonds, 20-year maximum, \$1,000 denomination maximum.

Address

H. E. BARROW,
Town Treasurer.

Bids close August 23, 1920.

\$10,000 6% Municipal Bonds

Ellisville, Miss.

Notice is hereby given that the City of Ellisville, Mississippi, has issued \$10,000 negotiable municipal bonds, bearing 6 per cent. interest, and solicitation is hereby made for the purchase of said bonds, the board reserving the right to reject any and all bids. All bids must be accompanied with a certified check in the amount of \$100, and all of said bids must be filed with the City Clerk by August 23, 1920.

H. P. GOUGH,
Clerk.

Bids close August 23, 1920.

\$60,000 5% Municipal Bonds

Albany, Ga.

Bids are solicited and will be received by the Mayor and Council of the City of Albany, Georgia, up to noon of the 23d day of August, 1920, for the purchase of the entire issue of the City's bonds now authorized and ready for issue as of August 1, 1920, amounting to the principal sum of \$60,000.

Of said bonds there will be issued and dated as of August 1, 1920, 60 bonds, numbered consecutively from 1 to 60 (both numbers inclusive), in denominations of \$1,000, each to bear interest at the rate of 5 per cent. per annum from date, payable semi-annually on the 1st day of February and August of each year, and evidenced by interest coupons attached to said bonds.

All of said bonds will become due and payable 29 years and 6 months from date, to wit, on February 1, 1950. Both principal and the interest of said bonds will be payable in gold coin of the United States of the present standard of weight and fineness at the office of Metals and Mechanics National Bank in the City of New York, State of New York.

Said bonds were duly validated by judgment of the Superior Court of Dougherty County on the 24th day of July, 1920, and are for the following purposes:

Bonds numbers 1 to 28, inclusive, for street paving, \$28,000.

Bonds numbers 29 to 40, inclusive, for sewer construction and extension, \$12,000.

Bonds numbers 41 to 50, inclusive, for extension of water mains, \$10,000.

Bonds numbers 51 to 60, inclusive, for erection and equipment of schoolhouse, \$10,000.

The record, properly certified, of all the proceedings had and taken relative to the issue and validation of said bonds will be furnished the successful bidder without expense. The expense of printing or lithographing said bonds will be borne by the purchaser.

All bids must be sealed, directed to the Clerk of Council, Albany, Georgia, labeled "Bond Bid," and must be accompanied by the certified check of the bidder for \$1000. No bid will be accepted for less than par, and the Mayor and Council reserve the right to reject any and all bids.

This the 30th day of July, 1920.

H. A. PEACOCK,

Mayor.

J. R. DE GRAFFENRIED,
Clerk of Council.

FINANCIAL STATEMENT.

Official assessed value of taxable property, 1919.....	\$7,886,454.76
Estimated assessed value of taxable property, 1920.....	8,500,000.00
Total bonded debt of the City, including above issue of bonds	537,000.00
Amount in sinking fund to retire bonded debt.....	62,228.82
Fixed assets as per statement of certified accountants as of March 1, 1920.....	1,017,792.41
Total net fixed and current assets (over and above all liabilities, including bonded debt), as reported by certified accountants as of March 1, 1920.....	692,102.95

Tax rate per \$1000, 1919, \$17.50.
Population United States Census, 1920, 11,555.

Population United States Census, 1910, 8140.
Correct: August 4, 1920.

WM. M. WILDER,
Treasurer and Collector,
City of Albany, Georgia.

\$10,000 6% Bridge Bonds

Miss. Point, Miss.

The City of Moss Point, Mississippi, will, through its Clerk, C. M. Fairley, receive proposals to purchase at private sale \$10,000 6 per cent. bridge bonds. Interest payable semi-annually on the first day of July and January in each year. One bond for \$500 due July 1 in each year until all are paid. No bid for less than par will be considered.

Bids close August 20, 1920.

State Highway

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, at Nashville, Tennessee, until 2 o'clock P. M. August 20, 1920, for the construction of 16.304 miles of State Highway No. 7 between the Davidson County line and Murfreesboro, in Rutherford County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

22,082 cu. yds. Common Excavation.	
2,123 cu. yds. Solid Rock Excavation.	
4,391 cu. yds. Borrow.	
9.19 cu. yds. Special Concrete.	
192.38 cu. yds. Class "A" Concrete.	
93.27 cu. yds. Class "B" Concrete.	
17,955 pounds Deformed Steel Bars.	
36 lin. ft. 12" Culvert Pipe.	Furnishing and Placing.
248 lin. ft. 15" Culvert Pipe.	
120 lin. ft. 18" Culvert Pipe.	
270 lin. ft. 24" Culvert Pipe.	
1,496 cu. yds. Overhaul.	
40.98 cu. yds. Class "B" Concrete.	
255 lbs. Deformed Steel Bars.	Pipe Culvert Endwalls.
157.40 cu. yds. Class "A" Concrete.	Culverts.
33 cu. yds. Class "B" Concrete.	Unit Construction.
13,943 lbs. Deformed Steel Bars.	
135,044 sq. yds. Reconstructed Base Course.	
55,986 sq. yds. Broken Stone Base Course, "A."	
135,044 sq. yds. Broken Stone Base Course, "B."	
191,311 sq. yds. Bituminous Macadam Penetration, or	
191,311 sq. yds. Rock Asphalt Surface Course.	

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Murfreesboro, Tennessee.

Any additional information may be secured from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,
Chief Engineer.

Bids close August 31, 1920.

State Highways

STATE OF MARYLAND.
STATE ROADS COMMISSION.

NOTICE TO CONTRACTORS.

Baltimore, Md.
Sealed proposals for building three sections of State Highway as follows:

ALLEGANY COUNTY, CONTRACT No. A-18:
One section of State Highway on the Legislative Road between Morantown and Allegany for a distance of 1.4 miles. (Concrete.)

ANNE ARUNDEL COUNTY, CONTRACT No. AA-19:
One section of State Highway on the Mountain Road from end of concrete section to Jacobsville for a distance of 2.14 miles. (Concrete.)

BALTIMORE COUNTY, CONTRACT No. B-38:
One section of State Highway at Hereford from the York Road 2.04 miles. (Concrete.)

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Md., until 12 M. on the 31st day of August, 1920, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1. as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 16th day of August, 1920.

J. N. MACKALL,
Chairman.
L. H. STEUART,
Secretary.

Bids close August 24, 1920.

State Highways STATE OF MARYLAND. STATE ROADS COMMISSION.

NOTICE TO CONTRACTORS.

Baltimore, Md.
Sealed proposals for building two sections of State Highway as follows:

WORCESTER COUNTY, CONTRACT No. Wo-21:
One section of State Highway through the Town of Pocomoke for a distance of 3.1 mile. (Concrete.)

WORCESTER COUNTY, CONTRACT No. Wo-22:
One section of State Highway through the Town of Snow Hill for a distance of .19 mile. (Concrete.)

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Md., until 12 M. on the 24th day of August, 1920, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1. as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 11th day of August, 1920.

JOHN N. MAKALL,
Chairman.
L. H. STEUART,
Secretary.

Bids close August 25, 1920.

State Road FEDERAL-AID PROJECT No. 104.

St. Matthews, S. C.
Notice is hereby given that sealed proposals for highway improvements through the Town of St. Matthews, in Calhoun County, will be received at the office of the Town Council, at St. Matthews, S. C., until 12 o'clock noon August 25, 1920, and then publicly opened.

The work to be done consists of approximately:

4,000 cubic yards unclassified excavation.
5,800 linear feet of combination concrete curb and gutter.
1,200 linear feet of 18-inch storm drain in place.
12 catch-basins, complete.
16,128 square yards of surfacing.

Bids may be submitted for any and all of the following types: Cement concrete, asphaltic concrete and sheet asphalt, both of the latter on cement-concrete base.

Detailed plans of the work may be seen for examination at the office of the Town Council, St. Matthews, S. C., and at the office of the Highway Commission, Columbia, S. C. Complete set of plans will be furnished for \$5.

The right is reserved to reject any and all bids and waive all technicalities.

A certified check for one thousand dollars, payable to Mayor of the Town of St. Matthews, S. C., must accompany each proposal.

Proposal forms may be secured from Clerk to Council, St. Matthews, S. C., or from the State Highway Engineer, Columbia, S. C.

J. L. CARROLL,
Mayor.
W. R. SYMMES,
Clerk.

Bids close September 6, 1920.

Steel Bridge

Pantego, N. C.
Sealed proposals will be received by the Beaufort County Road Commission at Washington, N. C., until 11 A. M. September 6, 1920, for one (1) 80-foot length steel bridge, with 25-foot center removable span and with piers and abutments.

Alternate plans by bidders will be considered.

Each bid must be accompanied by a certified check for \$1000 as evidence of good faith.

Plans will be on file at the Resident Engineer's office in Washington, N. C., and may be obtained from the Engineer at Durham, North Carolina.

The right is reserved to reject any or all bids.

F. C. KUGLER,
Chairman.
J. D. BULLOCK,
Secretary.
Engineer:
GILBERT C. WHITE,
Durham, N. C.

Bids close August 20, 1920.

Grading and Drainage Structures

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, at Nashville, Tennessee, until 2 o'clock P. M. August 20, 1920, for the Grading and Drainage Structures complete on 9.94 miles of State Highway No. 3, between the Cheatham County line and Burns, in Dickson County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

57,471 cu. yds. Common Excavation.	
8,095 cu. yds. Borrow.	
43.24 cu. yds. Class "A" Concrete.	
3,543 lbs. Deformed Steel Bars.	
2 lin. ft. 12" Pipe Culverts.	Furnishing and Placing.
718 lin. ft. 15" Pipe Culverts.	
86 lin. ft. 18" Pipe Culverts.	
118 lin. ft. 24" Pipe Culverts.	
134 lin. ft. 30" Pipe Culverts.	
3,545 lin. ft. Wooden Railing.	
63.26 cu. yds. Class "B" Concrete.	Pipe Culvert Endwalls.
352 lbs. Deformed Steel Bars.	Culverts.
25.18 cu. yds. Class "A" Concrete.	Unit Construction.
1.83 cu. yds. Class "B" Concrete.	
1,884 lbs. Deformed Steel Bars.	

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Charlotte, Tennessee.

Any additional information may be secured from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,
Chief Engineer.

Bids close August 20, 1920.

Grading and Drainage Structures

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, until 2 o'clock P. M. August 20, 1920, for the grading and drainage structures under twenty-foot span on 14.54 miles of State Highway No. 36 between McKenzie, in Carroll County, and Dresden, in Weakley County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

84,120 cu. yds. Common Excavation.	
45,059 cu. yds. Borrow.	
315 cu. yds. Overhaul.	
283 cu. yds. Class "A" Concrete.	
270 cu. yds. Class "B" Concrete.	
46,700 pounds Deformed Steel Bars.	
584 lin. ft. 15" Culvert Pipe.	Pipe Culvert Endwalls.
510 lin. ft. 18" Culvert Pipe.	
356 lin. ft. 24" Culvert Pipe.	
79.5 cu. yds. Class "B" Concrete.	
360 lbs. Deformed Steel Bars.	
1000 feet Guard Rail.	

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Dresden, Tennessee.

Any additional information may be secured from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,
Chief Engineer.

Engineer Wanted

Atlanta, Ga.
First-class experienced highway bridge engineer to take full charge of the bridge work of the State Highway Department of Georgia. Only man experienced in design and construction will be considered. Apply to W. R. Neel, State Engineer, 700 Walton Bldg., Atlanta, Ga.

Bids close August 30, 1920.

Drainage Improvements

Greenville, N. C.

Sealed proposals for the construction of drainage improvements in Pitt County Drainage District No. 2 (Grindle Creek Drainage District), Greenville, N. C., will be received by the Board of Drainage Commissioners up to 11 o'clock A. M. on the 30th day of August, 1920, at their office in Greenville, N. C.

The work to be done consists of cutting 2 3/4 miles of ditches, containing approximately 1,108,564 cubic yards of excavation. The canal begins at a point on the western boundary of the Kinston-Weldon branch of the Atlantic Coast Line Railroad, the same being the head of Grindle Creek basin, and following the low level of said basin, which is approximately its center, the windings of said creek down the various courses to the road crossing at Pactolus, a distance of 2 3/4 miles. The canal at its head will be eight (8) feet wide at the bottom and twenty-four (24) feet wide at the top. These proportions will be maintained to the end of the canal, but the width will gradually increase until it becomes, at the lower end or outlet, thirty (30) feet in width at the bottom and forty-six (46) feet in width at the top. The average depth will be approximately eight. The contractor will be required to use two dredges for the work, one dredge to work on either side of the railroad. The contractor will be further required to clear the timber and underbrush for right of way for the canal, so as to leave a cleared right of way 25 feet on each side of the canal when the work is completed. This work is to be completed on or before the first day of January, 1923. A certified check in the sum of \$500, made payable to the order of the Board of Drainage Commissioners of Pitt County Drainage District No. 2, must accompany each bid. The Board reserves the right to reject any and all bids, and any bids accepted by the Board will be subject to confirmation by the Superior Court of Pitt County. The plans and specifications may be seen at the office of F. M. Wooten, Greenville, N. C., or at the office of Harding & Rivers, Engineers, at Greenville, N. C.

(Signed) GEO T. LEACH,
Chairman.
(Signed) J. C. TAYLOR,
Secretary.

Bids close August 25, 1920.

State Highway BridgeN. C. FEDERAL-AID PROJECT No. 118.
Greensboro, N. C.

Sealed bids for the construction of a Reinforced Concrete Bridge over the Yadkin River between Montgomery and Stanly Counties, N. C., consisting of three Open Spandrel Ribbed Arches of 146' 3/4" span, and fourteen Deck Girder Approach Spans of forty feet each, will be received by the North Carolina State Highway Commission at the Division Office in Greensboro, N. C., until 12 o'clock M. on the 25th day of August, 1920, when they will be opened and read.

No bids will be received after the hour fixed.

The work will consist approximately as follows:

2,158 cu. yds. Class "A" Concrete.
1,826 cu. yds. Class "B" Concrete.
362,190 lbs. Reinforcing Steel.
10,470 lbs. Plates and Bolts.
2 Name Plates.

No bids will be considered unless accompanied by a corporate surety bond or by a properly certified check for Eight Thousand (\$8000) Dollars, made payable to Frank Page, Chairman.

A corporate surety bond or other satisfactory security will be required for the complete fulfillment of the contract.

Specifications, forms of contract, proposal blanks, etc., can be obtained by writing to the office of the State Highway Commission, Raleigh, N. C.

Plans may be seen in the office of the Division Engineer at Greensboro, N. C., or in the office of the Bridge Engineer at Raleigh, N. C.

Any increase in freight rates made public after date of letting and paid by contractor will be allowed if proper vouchers are submitted at the time of payment of such increased rates.

The right is reserved to reject any or all bids or to accept any bid deemed best for the State and the County.

By order of the North Carolina State Highway Commission.

This 31st day of July, 1920.

W. S. FALLIS,
State Highway Engineer.

Bids close September 1, 1920.

Street, Water and Sewer Extensions

Wilson, N. C.

Sealed proposals will be received for the materials and labor in connection with the improvement of certain streets, the extension of water mains and sanitary sewers in the Town of Wilson, N. C., by the Mayor and Board of Commissioners of said Town, until 2:30 o'clock P. M. of Wednesday, September 1, 1920, when they will be opened and publicly read. Contract will be made dependent upon the sale of bonds.

The work will consist of the following approximate quantities:

75,000 square yards of asphaltic pavement.
(Bids will be asked on sheet asphalt, bitulithic and "Topeka" pavements.)
75,000 square yards of 5-inch concrete base.
17,000 cubic yards of excavation.
42,000 linear feet of sanitary and storm sewers.
110 manholes.
200 catchbasins.
46,500 linear feet of concrete curb and gutter.
13,700 linear feet of 6-inch Class B water mains.

The Town reserves the right to use any of the above types of pavement for the whole or any part of the work.

Plans and specifications may be examined at the office of the Engineers or the office of the Town Clerk. Specifications are ready for delivery, and the prospective bidders may obtain same by addressing direct to the Engineers at Wilson, N. C., and making a deposit of \$10, which will be refunded upon the return of the specifications in good condition.

Each proposal must be accompanied by a certified check in the sum of five (5) per cent. of the amount bid, as evidence of good faith upon the part of the bidder.

The Town reserves the right to reject any or all bids or to accept any which may seem to it to be the best interest to the Town of Wilson.

D. H. HILL, Mayor.
L. J. HERRING, Chairman.
T. A. HINNANT, Clerk.

GLADDING, MORRISON & OTT,
Municipal Engineers,
Wilson, N. C.

Bids close August 20, 1920.

Canal Excavation and Bridges

Clinton, Ky.

The Board of Drainage Commissioners of Hickman County, Kentucky, will receive bids until 12 o'clock A. M. August 20, 1920, for the following:

The excavation of one main canal, aggregating 48,200 feet in length, and three laterals, aggregating 3300 feet in length, all aggregating 291,738 cubic yards of excavation.

Five wooden bridges across the said ditch on public roads crossing the same. All in Brush Creek Drainage District, in Hickman and Graves counties, Kentucky.

Bids on excavation will include the clearing of the right-of-way for the said ditch, which amounts to about 20 per cent. of the whole right-of-way.

Separate bids on the above work of excavation and building of bridges will be acceptable.

Plans and specifications may be seen at the office of the Board of Drainage Commissioners of Hickman County, Clinton, Ky., or by application to the undersigned.

Bids must be accompanied by certified check for \$1000.

Bonds have been sold. Commissioners reserve the right to reject any and all bids.

H. M. CRESAP,
President of the Board.
J. A. PORTER,
Engineer.

Bids close September 23, 1920.

High-school Building

Bay Minette, Ala.

Sealed bids will be received by the Building Committee for the erection of the Baldwin County High-school Building in Bay Minette, Alabama, until 10 A. M. September 23, 1920. Plans and specifications may be seen at the Baldwin County Bank Building by applying to W. D. Stapleton, Chairman, Bay Minette, Ala.

A certified check of \$500 must accompany each bid.

Right is reserved to reject any or all bids.
W. D. STAPLETON,
Chairman.

Bids close September 15, 1920.

Water-works Improvement

Lawrenceburg, Ky.

Sealed proposals will be received for the materials and labor in connection with the above work by the Mayor and Board of Council of the City of Lawrenceburg, Kentucky, until 7 o'clock P. M. September 15, 1920, when they will be opened and publicly read.

The water-works improvement contemplated consist of the installation of a pressure filtration plant and appurtenance; also the erection of a building to house same.

Bids will be entertained separately upon the two sections into which the work is divided, that is a general contract covering the construction work (building, foundations, etc.), and another contract covering the filter and appurtenances.

Plans and specifications may be examined at the office of the Chairman of the Water-works Committee. Prospective bidders may procure plans and specifications by addressing the above and making a deposit of \$25, which deposit will be refunded upon the return of the plans and specifications in good condition within 10 days after the date of closing of bids.

Each proposal must be accompanied by a certified check or bid bond in the sum of five (5) per cent. of the amount bid, as evidence of good faith upon the part of the bidder.

The City reserves the right to reject any and all bids or to accept any which may seem to it to be to the best interests of the City of Lawrenceburg, Kentucky.

DR. J. L. TALL,
Mayor.
B. S. GRIFF,
Chairman.

Bids close September 6, 1920.

Courthouse

Tunica, Miss.

The Board of Supervisors of Tunica County, Mississippi, will receive bids for the construction of a Courthouse for said County until 1 o'clock P. M. Monday, September 6, 1920, at which time all bids received will be opened and considered at the regular September, 1920, meeting of said Board.

Separate bids will also be received on plumbing, electric wiring, heating, electric fixtures, clock and other items, as directed by the architects of the Board, according to the plans and specifications now on file with the Clerk of the Chancery Court of said County.

Each bid must be accompanied by a certified check in the sum of \$1000 to secure compliance with bid. Bond in 100 per cent. of contract price will be required.

Contract will be awarded the lowest bidder. The Board of Supervisors reserves the right to reject any or all bids.

Plans and specifications are on file in the office of the Chancery Clerk of Tunica County, Miss., and will be issued from the office of Frank P. Gates Company, Architects and Engineers, Clarksdale, Miss. A deposit of \$10 is required on receipt of plans and specifications, to be returned when said plans and specifications are returned to the Architect's office.

Witness my signature and seal of office, this 5th day of August, 1920.

L. C. SHANNON,
Chancery Clerk.

Bids close August 31, 1920.

Freight Shed Side Extension

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans, at their office suite 200 New Court Building, until 8 P. M. o'clock Tuesday, August 31, 1920, and then publicly opened, for the furnishing or for the furnishing and erecting of all the structural steel required for the "Poydras Street Freight Shed Side Extension."

A deposit of \$500 in cash or certified check is required with proposal.

Bond of \$20,000 is required with notarial contract.

Pavements—75 per cent. of the bid for material will be paid upon delivery and acceptance of same on the site. The balance will be paid upon completion of erection.

Plans and specifications are on file in the office of the Chief Engineer, Arsene Perillat, by whom full sets will be furnished to prospective bidders on deposit of \$10, which will be refunded to depositors who submit proposals and return set in good condition.

The right is reserved to reject any or all bids and to waive informalities.

W. O. HUDSON,
President